

AMERICAN RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, Editor.

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SATURDAY, MARCH 31, 1849.

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Saturday, March 31, 1849.

Wanted Immediately.

8000 Tons of Inverted T Rail wanted, of about 60 lbs. to the yard, for laying 80 miles of road, by the Columbus and Lake Erie Railroad Company, and Mansfield and Sandusky Railroad Company, 60 miles of which is new road, and to re-lay 20 miles on the last mentioned road.

Proposals will be received until May 15, addressed (under seal) to me, at this place.

Proposals are invited for cash on delivery, and also for 7 per cent. bonds, payable in New York or Boston. Delivery may be made at Oswego, Albany, or New York, or at Portsmouth, on the Ohio river, Montreal, Canada, or at Sandusky city. American Iron would be preferred, except good English. Parties proposing, will please name the place preferred for delivery. Delivery to commence as early as June 1st, and complete as early as October 1st, if practicable.

B. HIGGINS, Superintendent, etc.
Sandusky City, Ohio, March 15, 1849. 2m.13

Railroad Iron.

THE Undersigned offer for sale 3000 Tons Railroad Iron at a fixed price, to be made of any required ordinary section, and of approved stamp.

They are generally prepared to contract for the delivery of Railroad Iron, Pig, Bar and Sheet Iron—or to take orders for the same—all of favorite brands, and on the usual terms.

ILLIUS & MAKIN.

41 Broad street.
3m.13

March 29, 1849.

ST. LAWRENCE & ATLANTIC RAILROAD COMPANY.

Notice is hereby given that the Trains run twice per day between Montreal and St. Hyacinthe, leaving each terminus alternately, until further notice.

The first train starts from St. Hyacinthe at 7 o'clock a.m., reaching Montreal at 8½ a.m., leaving Montreal at 2 p.m., and reaching St. Hyacinthe at 3½ p.m.

The second train leaves Montreal at 9 o'clock, a.m., reaching St. Hyacinthe at 10½ a.m., leaving St. Hyacinthe at 4 p.m., reaches Montreal at 5½ p.m.

THOMAS STEERS, Secretary.

Extension of the Baltimore & Ohio Railroad.

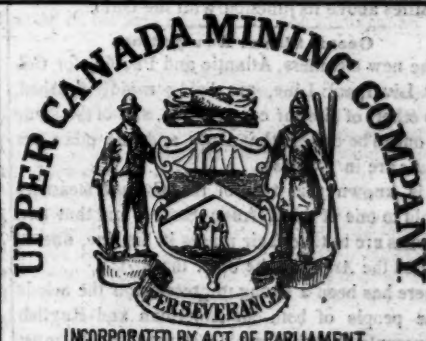
TO CONTRACTORS FOR GRADUATION AND MASONRY.

PROPOSALS are invited for the Graduation and Masonry of the following described sections of this road—the sections averaging a mile in length—commencing in the town of Cumberland; Sections 1, 2, 6, 7, 8 and 10, will be let, embracing considerable rock work along the Potomac river bluffs, and the masonry of several bridges on Section st. Also all the sections from 30 to 45 inclusive, (excepting sections 43 and 44) beginning 28 miles from Cumberland, about a mile below the mouth of Savage river, and terminating at the summit of the mountain. The work upon these sections is heavy, containing much rock excavation and 2 tunnels, each about 600 feet in length, and a stone bridge of considerable size. The whole number of sections now to be let is 20. In the course of the spring and summer upwards of 30 more heavy sections will be put under contract between Cumberland and Three Forks Creek. The remaining sections between those points, and other work beyond the latter, will be let in the spring of 1850.

Specifications of the work on the 20 sections now to be let, will be ready by the 25th of March current.—They will be distributed from the company's offices in Baltimore, Frederick, Harper's Ferry, Cumberland and Washington. The proposals will be directed to the undersigned, at No. 23 Hanover street, Baltimore, and will be received until Saturday, the 28th of April, inclusive. Before making bids the line should be thoroughly examined, and the resident engineers will be in attendance thereon to give information. The most satisfactory testimonials will be demanded. The payments will be made in cash, reserving the usual 20 per cent until the completion of the contract. The most energetic prosecution of the work will be required. By order of the President and Directors.

BENJ. H. LATROBE, Chief Engineer.
Baltimore, March 14, 1849 5t.12

IN our paper of March 10th, we copied a most valuable article from the Philadelphia Commercial List upon the "Iron Manufacture," but were compelled to postpone the publication of a portion of it till our issue of the 17th, in which number the proper credit might not appear to those who had not read the previous number. We feel more than ordinary pleasure in alluding to this matter, from the opportunity it furnishes of calling attention to the merit of that paper. C. G. CHILDS, Esq., the accomplished Editor of the Commercial List, presents his readers every week a greater amount of valuable statistical information touching the business and commerce of the country,—more especially Pennsylvania,—than can be found any where else in the same space. The great industrial interests of the country have no abler or more faithful advocate. We wish Mr. Ewing could induce Colonel Childs to take a leading place in the Home Department.



INCORPORATED BY ACT OF PARLIAMENT.

NOTICE is hereby given, that an ASSESSMENT OF ONE SHILLING AND THREE PENCE PER SHARE has been levied on the STOCK OF THE UPPER CANADA MINING COMPANY—one half thereof, or Seven Pence Halfpenny per share, being payable, at the office of the Company, in Hamilton, or to Messrs. W. & J. CURRIE, Agents, Wall St. New York, on the First Day of April next, and the other half on the First day of July next ensuing. By order, J. D. BROWN, Secretary U. C. M. C.

Hamilton, 24th February, 1849. 12f

Price of Railroad Iron.

The quotation price of merchant bar iron in Liverpool, December 22, 1848, was £4 15s. per ton, and a small quantity of rails were sold for this market at that time at £5 per ton, free on board at Cardiff. The ordinary range of freights was then about 20s. per ton, so that ordinary railway bars at that time could be contracted for at a trifle less than \$40 per ton, including all charges, deliverable in New York.

At the time of the sailing of the Canada, March 10th, rails were quoted at £6 to £6 5s. in Wales, cash. Orders given this week with cash in hand, or its equivalent, on delivery of the iron, are taken for limited amounts by responsible parties at £5 15s. free on board at Wales. At these prices rails can be laid down in New York for \$50 per ton, in quantities of 2,000 tons or less; large contracts are declined at this time. Orders requiring time to mature, are taken sparingly, scarcely exceeding in any case more than 2,000 tons; and a further price is required for any terms other than cash in hand.

We learn that the rails for the Richmond & Danville R. R., Va., are being made at Richmond, under a contract made some months since, at \$55 per ton, which is the lowest price at which American rails have been made. Whether our large manufactur-

turers will take contracts at these rates at the present time, may be problematical. In January contracts at \$55 were made with them, but the recent advance in pig iron may require a further advance upon rails. The news by the Canada was not regarded as quite so favorable for a rapid advance in iron, as was generally expected among our iron dealers.

These facts and suggestions may aid several of our friends who are in the market for iron, and who desired from us some opinion as to the probable price at which contracts could be made. We trust they will keep in view the suggestions in our last paper.

A New Railroad in Indiana.

A survey and estimate have just been completed for a railroad from Crawfordsville to Lafayette, a distance of 26½ miles, and the line is to be put under contract in the month of May next.

Crawfordsville is about 45 miles to the north-west of Indianapolis, the Capitol of the State, and is the seat of Wabash College. Lafayette is at the head of steamboat navigation on the Wabash river, 310 miles above its junction with the Ohio.

Ocean Steam Navigation.

The new steamers, Atlantic and Pacific, for Collins's Liverpool Line, are being rapidly finished. Two others of similar construction, and of the same size, one to be called the *Arctic* and the other the *Adriatic* are in progress.

It is known that two of the *Cunard* steamers are sold to one of the German States, and that two new ones are to take their places in the line, one to be called the *Asia* and the other the *Africa*.

There has been a strong impression on the minds of the people of both the American and English governments, that the best constructed boats must continue to come from the Clyde, and that Napier's engines will continue to hold their claims to superiority. We shall soon have some satisfactory means of comparing with them the workmanship of our own mechanics in these new steamers.

A Railroad Coming.

About 100 men are employed on the continuation of the Cincinnati and Sandusky Railroad, this side of Sandusky, with the intention of bringing it to Huron the coming season.

The Boston company which owns the Mad river road also owns the old Ohio railroad which extends from Manhattan to Coneaut, and was once partly built by the Ohio railroad company. They are coming to Huron to get deeper water than is found in Sandusky Bay. They will soon be in Cleveland, we venture to say by another spring.—*Cleveland Plaindealer*.

The Railroad Convention at Brattleboro' on Wednesday, was well attended, considering the storm. A good spirit prevailed; and a resolution passed, appointing a committee to confer with other railroad corporations, and with individuals, in regard to the raising of the stock necessary to ensure the speedy completion of the Vermont Valley road, extending from Brattleboro' to Bellows Falls.

We are gratified to state, says the Jackson, (Tenn.) Whig of the 23d ult. that the party on division No. 4, of the Mobile and Ohio railroad survey, under the charge of Mr. H. S. Kean and others, have reached the suburbs of our city, in the survey of the route of the contemplated railroad. This party commenced their operations at Columbus, and we are pleased to hear that they are well satisfied with the practicability of the road over the country they have examined. We are more and more con-

vinced of the ultimate success of this grand enterprise.—*Alabama Planter*.

From the Glasgow Practical Mechanics' Journal. Phenomenon attending the Discharge of High-Pressure Steam

The phenomenon which Mr. Vincent Bird has observed on lifting the safety-valve, is probably caused by a current of electricity passing from the steam to the metallic valve. If a conductor is brought into the vicinity of a cylinder of glass, which has been acted upon by friction, a lambent light will be seen to pass between the two. Steam, like excited glass, in passing from an orifice, is in a highly electric, or positively electric state, whilst the boiler is pincean, or negative. If Mr. Bird will take the trouble to insulate himself, holding a conducting-rod in the discharge of steam, he will find that an electric spark will result from touching another person standing on the ground.

It has not yet been decided whether the electricity of steam is caused by evaporation, or by chemical action. However, it is a fact beyond all doubt, that electricity is given off in immense quantities during evaporation. Whether I am right or wrong, it is my presumption, as to the origin of the light observed by your correspondent, he is, at any rate, entitled to great credit for bringing the matter forward for the investigation of the public. R. SMITH.

Blackford, Dec. 1, 1848.

New York Institution of Civil Engineers.

We have just received a published copy of the transactions of the New York Institution of Civil Engineers, organized at Albany, on the 5th of January last. This number contains the Address of the Trustees, the act of the Legislature authorising the Institution, the constitution and by-laws adopted, the proceedings of the association, and a list of its members. The whole thing is got up in a style highly creditable to the taste and skill of all parties concerned, and its typographical execution is a model for all similar works.

The Institution was organized by the choice of CHARLES B. STUART, Esq., Surveyor General of New York, as President.

EDWARD W. SERRELL,
ALEXANDER CAMPBELL,
CHARLES W. WENTZ, and
CHARLES R. RABBITT,

as Vice Presidents, and
FRANCIS A. UTTER, Actuary.

Below we give the Address of the Trustees which expresses with clearness, elegance and precision, the views which led to the foundation of the Institution, which will meet a hearty and full response from all persons at all conversant with the duties and responsibilities of the engineering profession. The physical sciences are daily becoming more and more attractive and important in the progress of the age. The profession of the engineer now offers to the man of genius and talent a more certain path to wealth and renown than any of the other learned professions. Let the spirit of this address be carried into practice, and a new impulse will be given to the cause of public improvements throughout the whole country.

By the 6th article of the Constitution there is to be an annual meeting of the Institution on the third Wednesday of January, and quarterly meetings on the third Wednesdays of April, July and October in each year.

Perhaps some arrangements to give more extended circulation to the papers of the Institution might be devised, than the issuing of them separately in the expensive form of this specimen number. An effort should be made to give the greatest possible scope to the movement of the association, so that it may bring the greatest amount of substantial benefit to the whole profession:

ADDRESS

To the Civil Engineers of the State of New York:

The undersigned, in compliance with a resolution adopted at a meeting of the members of the New York State Institution of Civil Engineers, held at the Capitol in the city of Albany, on the fifth day of January last, beg leave to call your attention to the proceedings of the conventions held in the cities of New York and Albany, and to the constitution, act of incorporation, regulations and by-laws, of the Institution, published in this number, and request your aid and co-operation in establishing an Association of Civil Engineers, upon a permanent basis, in this State.

An attempt to enlarge in this address upon the benefits resulting from such an association, in the advancement of professional knowledge, and the promotion of that friendly intercourse so desirable among men engaged or interested in like professions, will not be deemed necessary; the advantages of the organization must be apparent; the collection of drawings, models, manuscripts and publications, would enable each member of the profession to profit by the experience of all the others, and an immense amount of knowledge, to be acquired only by experiment and observation, could thus be communicated. The published proceedings of the Institution, diffusing knowledge amongst its members, would not be altogether uninteresting to the public at large, which in a remote degree is affected by the labors of the Engineer; and it is confidently believed that with unity of purpose, and reasonable exertion on the part of members, results so desirable may be obtained, and an Institution established which shall be alike creditable to the profession and the State.

At the regular meetings of the Institution discussions of practical questions may be had, and Engineers from various parts of the State participating in them, the experience of all would be embodied in the minutes. Plans and specifications of structures, built or being built, deposited at the rooms of the Institution, would soon swell to volumes, and in a comparatively short period, these volumes would contain drawings of the most important structures in use in the state. The Engineer might accompany his donations with a narrative of the difficulties which he encountered; the methods by which success was ensured, and the cost of the structure. A fountain of practical information, too voluminous for publication, would thus be acquired, from which every member of the Institution might draw on the experience of others.

The records of American inventions and improvements, patented, may be found on scraps of paper, in drawings and models at the shops of machinists, or in the memoranda of Engineers. The tests of the strength and durability of materials, the cost of important structures, and the whole history of professional experience, acquired by years of labor, and not infrequently at an expense to the public of large sums of money, fades with the expiring memory of the individual, and dies to be re-acquired by like expenditures.

In the State of New York a sum exceeding eighty millions of dollars, is already invested in works designed for the transit of property alone. This vast sum was originally hazarded upon the plans and calculations of Civil Engineers, and its disbursement was made under their immediate superintendence. During the next quarter of a century not less than two hundred millions will have been invested in works of similar character within our borders. But with a superabundance of capital, and a denser population, more difficult and more expensive works will be confided to the Engineer, and upon his professional intelligence largely depends a successful result.

By every motive therefore of personal interest, by every impulse of patriotic or professional pride, the Engineer is impelled to a vigorous effort, to elevate the standard of professional excellence. It now remains for each and every Civil Engineer in this great State to decide for himself, whether the Institution, now formed is to effect a consummation so desirable.

CHARLES B. STUART,
EDWARD W. SERRELL,
ALEXANDER CAMPBELL,
CHARLES W. WENTZ,
CHARLES R. RABBITT,

Trustees.

Virginia.

Last week we gave some extracts from a speech delivered by Mr. Laidley, in the Virginia House of Delegates, in favor of a bill giving legislative aid to works of internal improvement. We now quote from a speech of Mr. Burwell, of Bedford, upon the same general subject. They are interesting as showing the reasons that have induced her to embark in the work of railways; and the influence that these works are extending in the states that have constructed them:—

"As a party to a compact to which she has deliberately set her seal, Virginia has agreed that the ratio in which power shall be apportioned amongst the several parties in this compact, shall be based upon comparative population, and upon a specific though qualified right of property recognized, and guaranteed to the southern members of the confederacy. Since therefore she has subscribed to the terms of this compact, since she has agreed that the representation of her interests shall be referred to the relative number of votes in the federal legislature, the measure of her influence and power must be in the direct ratio of her population, and in the ratio of her property modified by the constitutional restriction referred to. In this view patriotism and policy alike dictate that the surest way to protect her rights and promote her influence under our present constitutional compact, will be, to secure those elements of power which are recognized by that compact. When we look around we find that there is a fearful disparity between the power of other members of the confederacy and of this commonwealth. We find that the social and legislative energy of other states has offered to enterprise and capital such inducements in universal education, universal employment, in the comfort and independence which modern improvements bestow, that population and wealth have increased in a manner scarcely paralleled in the history of our race; and we cannot conceal the truth, that this remarkable disparity in the rate of increase is rapidly affecting the comparative influence of the more and less prosperous members of the confederacy. Of this, a reference to the original representation of the several states, traced through the succeeding terms of re-appointment, will afford conclusive evidence:

Virginia representation.	Whole No. Federal representation.
1790.....19	.....106
1800.....22	.....142
1810.....23	.....183
1820.....22	.....213
1830.....21	.....242
1834.....15	.....230

From this table it will be seen that in 1790, Virginia was the first state in representative influence. She now ranks the fourth. She then possessed one fifth of the whole power of the confederacy, this has declined under successive reductions to one fifteenth. The other states of the Union have increased within ten years preceding 1840, 2.19 per cent. It is therefore plain, that unless she shall encourage immigration, and prevent the emigration of her citizens to other states by furnishing facilities similar to those which exist elsewhere, that in 1860, when, according to the estimate of statisticians, the population of the United States will have reached thirty-one and a half millions, Virginia, with her present rate of increase and the present ratio of representation, will have about one twenty-fourth part of the influence of the federal government, whilst, with the ratio of representation raised to one hundred thousand, the relative measure of her federal influence will be about one thirtieth! Can any one require a more conclusive illustration of the truth, that the several states which compose this Union, are advancing in an unequal ratio in the acquisition of power under the federal constitution? If a more particular and palpable evidence of the decline of the influence of Virginia be required, it may be found by reference to another infallible indication. During the early history of our country, the highest offices were constantly filled by the statesmen of Virginia, and no administration was stable, that did not respect her opinions and principles. Yet, for twenty-five years past, consistent as she has been in her political position, those who have the right

to control her political action, have not received the poor compliment of a nomination for either of the offices of president or vice-president, whilst the great states of New York and Pennsylvania are openly regarded as the arbiters of our political destiny, and no political movement is undertaken which does not conciliate their favor.

"Nor have these great states been satisfied with political power, based upon numbers alone. New York has obtained the control of the whole fiscal system of the government. She regulates the value of the currency of every state, and no financial transaction can be accomplished without her sanction or agency. Her brokers fix the premium upon the national stock; they establish the value of all local currency—her banks fatten upon the federal credit—her agents purchase our staples—her ships transport them across the ocean—her merchants supply our merchandise; nothing is done without her agency.

"It is necessary to do more than to remind you of the vast mining and manufacturing interest of Pennsylvania, which is looked to with so much solicitude in the political conflicts of the country? Together with other northern states interested in the same elements of national prosperity, she dictates the whole system of indirect taxation by the federal government, and no rate of duties upon coal, iron, or upon imports, unacceptable to the great state of Pennsylvania, can long resist the power which she wields in the halls of national legislation and at the ballot box. Thus, manufactures, mining and commerce are her "peculiar interests," and she is entitled to twenty-four members of congress and of the electoral college, or to more than one ninth of the whole political power of the federal government.

"If we turn to another power, great, growing, destined to rival, possibly to overshadow those to which we have referred, we behold the Northwest, standing in compact array awaiting with impatience the formalities of the census, to assume the administrative policy of the public lands, and to engage the federal government in a system of internal improvement, which will open its rivers, protect its lake commerce, and construct a railroad to the Pacific.

"Whilst Virginia, like some alchemist of old, has been endeavoring to subtract substantial good from impalpable abstractions, from the wilderness an empire has sprung into existence, and where within the knowledge of the present generation, nothing was known but military stations and Indian agencies, populous cities now gem the borders of the beautiful lakes, commerce spreads her sails, and the whole land teems with agricultural productions.

"I have thus endeavored to show that the great interests which must develop themselves to the progress of any prosperous nation, have been secured and controlled by those members of the American confederacy, who have increased most rapidly in wealth and numbers, and have thus acquired, according to constitutional provisions, a preponderant influence in the administration of the common government. Indeed, when we philosophize upon the causes which have given to the states referred to an influence which protects their "peculiar interests," we feel more disposed to admire than to complain; for these results cannot be attributed to the natural advantages which some states possess over others. But upon examining the domestic policy of those states, the true causes will be discovered; it will be then seen, that each one of the states remarkable for its prosperity and power, is remarkable for the energy of its citizens and for the wise liberality of its legislation; each has its provision for popular education; each an enlarged plan of "internal commerce;" each has appropriated the common means towards making every common resource available. They have wooed to their ports the commerce of the world; they have tamed to its task the boundless power of their mountain streams, and made them minister to the industrial energies of their people—they have traced canals, laid down roads, and awakened from its useless torpor the mineral and metallic wealth of their mountains—a wealth richer in its usefulness, more precious in the reward which its employment bestows upon virtuous industry, than all the bright and vicious treasure of Golconda or Peru. As the obvious result of this energy and improvement, these states have added to their numbers by immigration, and to their wealth by the invited investment of capital."

Chesapeake and Ohio Canal.

The Alexandria Gazette states that the bill guaranteeing the bonds of the Chesapeake and Ohio canal company, for the sum of \$200,000, has passed both branches of the Virginia Legislature and become a law. This will be an important aid in furtherance of the purposes of the canal.

The following important amendment to the bill, was introduced, during its passage, and is a part of the law:

And provided further, That no such guarantee shall be made by the treasurer until the board of public works shall be satisfied that the Chesapeake and Ohio canal company have paid, or arranged to pay, out of any money or assets which they now have, or hereafter may have, applicable to such a purpose, or arranged to the best of their ability, all debts due to, and to comply with all contracts made with, the Alexandria canal company, and shall grant, upon fair and reasonable terms, to the said company (which shall have power to take hold and enjoy the same) such reasonable proportion of water rights, and privileges required by the said company, which may be in the power of the Chesapeake and Ohio canal company to afford, without affecting previous contracts, or which may not injure the navigation of the said Chesapeake and Ohio canal.

Items.

Cleveland, Columbus and Cincinnati Railroad.

We are gratified to learn by the Cleveland Herald, that the work on this important road is progressing rapidly. The engines and cars are contracted for, and the heavy T rail is to be used. The Plain-Dealer says that forty miles out of Cleveland will be completed by the 1st of December next.

The building of the Peterboro' and Shirley railroad was let out on last Wednesday week, at West Townsend, to Levi W. and Henry Woods & Co. The work is to be immediately commenced, and carried forward with despatch.

The Alexandria and Gordonsville Railroad, recently chartered by the legislature of Virginia, is virtually a branch of the Louisa railroad, which latter is steadily advancing westwardly towards the Blue Ridge, and will penetrate the great valley near Staunton. The capital stock of this company is \$900,000, of which the State has subscribed three fifths, or \$540,000. Of the remaining \$360,000, the corporation and citizens of Alexandria have taken \$145,500—leaving \$214,500 to be raised in the flourishing counties of Fairfax, Prince William, Fauquier, Rappahannock, Culpepper, Madison, Orange and Greene. The lists are not all returned, but it is believed considerably more than half of the amount is already secured.—*Balt. Am.*

The legislature of Ohio has incorporated the Mississippi and Ohio railroad company. The provisions of the act are said to be in accordance with the memorial signed by 3,000 citizens of Cincinnati, adopting the provisions of the charter granted by the State of Indiana, as those of the charter from the State of Ohio, in which form it passed. The law provides for the subscription on the part of Cincinnati, of the sum of one million of dollars to the capital stock of the company—the question to be submitted to the qualified voters of the city at a special election, to be ordered by the city council after ten days' notice.—*Ibid.*

According to advices from St. Petersburg of February 1, in the Belgian papers, a rival to the miraculous regions of California has already been found. A Col. Kavelovski, of that capital, who for a considerable time had superintended the workings of extensive gold mines in Siberia, and in the course of mineralogical pursuits had latterly been exploring the interior of Africa, has discovered on the right bank of the Sornal, at one day's journey from Cassin, many considerable hills or mountains of auriferous sands. On the washing of these sands he found they yielded more gold than those of Siberia. Pushing his researches further he examined the shores of the Ramla, the Dys, the Goucka, of the Benisch Angol and the Gamamil, and in all discovered deposits more or less extensive of golden sands. He proposed therefore that miners and gold washers should be sent from Russia to try the grounds and undertake the washings on a large scale.—*Railway Chronicle.*

Cost of Locomotion in India.

The cost of every British soldier as he stands on parade in the Punjab is £150 per head—and, of course, as much more to replace him if he is killed or disabled. Sir Charles Napier, in his recently published "Reflections on Indian Warfare," states that the usual allowance on an Indian line of march is one camel to two fighting men. We will omit all the other items of elephants, bullocks, horses and camp followers, swelling the unwieldy mass which follows in the rear of our armies, but the additional expenses must be enormous. We will suppose that we have 30,000 men; these will require 15,000 camels—averaging £20 each, and we have a locomotive stock which has cost us 300,000, and will probably all be destroyed, and have to be replaced within six months, at enhanced prices, to say nothing of the loss of baggage and stores, consequent on want of means of transit. Camels move at the rate of 2½ miles per hour, and if they did 300 miles in a month, one day with another, we suspect it would be found more than the ordinary average. Look at the time our forces have been on the march from their cantonments to the frontier, in the present war, and whatever may be the difficulties in constructing an Indian railway, can any one for a moment doubt that the outlay may not be saved over and over again in wear and tear in the conveyance of troops, without considering the amazing collateral advantages which must flow from their use in developing the resources of the country.—Surely the directors or their servants must be strangely blind to their own interests. There can be no reason given why India should not reap the advantages of good roads and rapid internal communication the same as any other country.—*Railway Chronicle.*

Railways in England.

Our English exchanges, received by the Canada, are principally occupied with accounts of the half-yearly meetings of the leading railway companies in the United Kingdom. These accounts exhibit fully the workings of the spirit of disappointed rivalry, with the impatient clamor of dissatisfied speculators.

The Eastern Counties railway meeting is thus described in Herapath's Journal:

EASTERN COUNTIES RAILWAY.

Of all the bear garden scenes we ever witnessed, the Eastern Counties meeting on Wednesday bore away the palm. What a difference between the reception the Directors had that day and six months before! Scarcely had the first Director made his appearance before hissings, yells, and all sorts of symptoms of disapprobation assailed his ears, and continued until after the Directors had taken their seats. Mr. Hudson, who was expected, except by a few who had heard of his resignation, was not there, and perhaps, fortunate it was for him that he was not, as from the temper of the meeting, one of the largest we ever saw, we are not sure he would have been safe from personal violence. Mr. Waddington, the deputy-chairman, who took the chair, could with difficulty obtain permission to read a letter from Mr. Hudson to him, and his reply. The purport of Mr. Hudson's letter was that as he differed from his colleagues in the steam-boat question, he did not intend to be at the meeting, and placed his resignation in Mr. Waddington's hands. The reading of the letter was interrupted with loud laughter, hootings, &c. Mr. Waddington's reply called upon Mr. Hudson to attend or to send in his resignation unconditionally. Days had elapsed since it was written, and no reply received, the announcement of which was met by loud expressions of derision and cries of "Turn 'em all out!" The Chairman said that Mr. Roney, the Secretary, had been constantly at the telegraph, but no communication had been received; the telegraph wires were out of order, which was responded to again by loud derisive laughter. Presently after it was announced that a message had been received from Mr. Hudson by telegraph, saying "He would write to-morrow," which called forth another loud peal of indignation.

At length the meeting sobered down a little, and the business was proceeded with so far as to hear the report read and the Chairman's speech, which was a lengthy one, and repeatedly cheered. Scarcely

had he sat down before a Committee of Inquiry was moved for amidst cries of "Turn 'em all out!" One gentleman made a most vehement speech, in which he applied language of the strongest description.

In reference to the charges against Mr. Hudson, the following statement from the same Journal may suffice:

MR. HUDSON AND THE CHARGES AGAINST HIM.

The prevailing topic in the city is still the charge against Mr. Hudson and the anticipations of the report of the Committee of Inquiry, which meet next Wednesday.

Amidst the clamor that has been raised upon this subject, the merits of the case have been lost sight of. As far as we understand the question, it appears to be a charge of selling 2,800 (not as stated in our last, 2,100) £15 shares at a considerable excess above the market value of the company of which Mr. Hudson was Chairman. Mr. Hudson replies that the price was fixed by Mr. Plews, one of his brother Directors. If that be the whole state of the case, it may be an improper, but it is not an illegal, act, or one of which the law would take cognizance. If the shares were Mr. Hudson's own property, he may undoubtedly make as much of them as he can; but a question arises whether it was proper and right for him, as Chairman, to accept more from the Company than a fair market price. According to standard commercial practice he may receive £200 or £300 for £100 worth of property from any other party, if he can get a man weak enough to give it; but it would not be tolerated from his own Company.

This question disposed of, the next that arises is, whether Mr. Hudson was an agent or trustee for the Company in the purchase of these shares. If he was, his act then becomes very different in charging more for the shares than they cost, no matter whether Mr. Plews, or even the Board as a body, fixed the price; but then the other Directors are equal as guilty as he is. Under these circumstances, we believe the law will regard the parties in the light of conspirators—the act a conspiracy—and all the conspiring Directors will have forfeited their seats and must disgorge the plunder.

The statement of the affairs of this company shows an expenditure equal to £9,283 365 sterling, or more than \$45,000,000; and the report of the Directors embraced the plan of consolidating the Northern and Eastern railway and the Norfolk railway with the Eastern Counties railway, making an aggregate capital of £12,556 820 sterling, or something over \$50,000,000.

After a most angry debate, and the appointment of a committee of investigation, a motion was made by Mr. Fryer that the bill "for the amalgamation with the Norfolk companies, now in the House of Commons, be withdrawn,"—a debate occurred on the motion, and a poll was demanded, and the motion was carried by a vote of 7,949 to 2,330, or a majority of 5,609.

Mr. Sergeant Gazelee inquired whether after this vote the Directors considered they could carry on the business of the Company with credit to themselves and satisfaction to the Proprietors, or whether they would place their seats at the disposal of the Shareholders?

The Chairman—in answer to the learned Sergeant, I can only say for myself—I cannot answer for my colleagues, for no Board meeting has been held on the subject—that is not my intention to remain at the Eastern Counties Board; certainly not after the Committee have made their report. The course I intend taking will be this—I shall consult my friends, which I have not been able to do, as I have had to attend two Eastern Counties Committees to-day. But I may say this—that I feel that I cannot conscientiously do justice to the Proprietors who have this day by their vote rescinded that which they formerly sanctioned. I cannot, I say, remain at the Board, not having the confidence of the Proprietors. This is my view at present. But, as I stated to you just now, I do not intend to retire till the committee shall have made their report.—(cheers)—and I will give you my reason for having determined to take such a course. I think it is well known

to you that I have for considerable period given much of my time to the management of the traffic of this railway. I must, therefore, necessarily know much about these affairs, on which the Committee may require explanation. It is for this reason that I shall attend at the Eastern Counties Board (as I have previously done) till the Committee make their report, for I think your interests might suffer if I retired sooner.—(Cheers.)

Herapath's Journal attempts to point out some remedies for the evils under which railway Companies are suffering:

What is wanted in railways are the following things—

1st. That the Shareholders should have much more power than they have in the election of good Directors, and the dismissal of obnoxious and useless ones.

2d. That railway accounts should be kept on one uniform and simple system, so that when a man understands one he may understand any.

3d. That the accounts, and all documents connected with them should be open to the inspection and examination of the Shareholders at proper times.

4th. That the capital accounts should be closed, except under very special circumstances, within 2 years after the railway is opened for public traffic.

4th. That all contracts should be let by public tender, and the lowest be accepted proper security can be given, or if not, the lowest that can have good security should be preferred.

6th. A careful, proper, and impartial audit.

If these things were done railway property would immediately rise in value, even if they paid less dividends than they do. Had Shareholders more power of election and dismissal, we should have a better class of men than are in some of the directions. Indeed none but men of high and honorable character would be tolerated for any time. We should besides, have men of business to administer the affairs of railways, not drones who go in for the pay—men who make Directorships a profession and a livelihood, or who get in to job, regardless of the interests of the concern, provided they can fill their own pockets. On this subject we could say a great deal if we had room.

The subject of letting contracts by public tender, we have likewise discussed over and over. The system of private letting is one of the greatest temptations to fraud and plunder that can well be contrived. Large fortunes have been made entirely from plunder drawn from this system. It would fill our Journal to repeat one half we have heard on good authority, upon this subject.

Patent Railway Axles.

Judicial Committee of the Privy Council.
(Before Lord Langdale Lord Brougham, Dr. Lushington and Mr. Pemberton Leigh.)
Petition of Hardy and others for the Extension of Letters Patent.

Mr. Hill (with whom were Mr. Webster and Mr. Phipson) said he appeared on behalf of Mr. Hardy, the patentee, and Messrs. Geach & Walker, who had become, by assignment, the proprietors to pray for an extension of the patent, which was for an improvement in the manufacture of railway axles. The patent was obtained in April, 1835, and Mr. Hardy, with limited means, attempted to carry it out, but after losing all his property in the attempt, assigned it, a few years ago, to Messrs. Geach & Walker. The invention consisted in fashioning pieces of iron in a rolling-mill, so that, when combined, a perfectly cylindrical form was effected. In the old process the iron was repeatedly cooled and heated during the welding; and the result was that the iron became very much deteriorated in character, and was rendered brittle, while, by the patented method the iron preserved its fibrous character and consequently its tenacity. In illustration of the great superiority of the patent axles, two of them were exhibited; one had sustained the shock of an express train, weighing upwards of one hundred tons, and moving at the speed of 60 miles an hour; the other had been struck by a train, in a similar manner, on the Eastern Counties. Although both these axles were considerably bent by the immense force of the blows to which they had been subjected, the skin of the iron, as it was termed, was not touched, and they did not exhibit the slightest crack.

The learned counsel then referred to the great losses that had been sustained by the manufacturers during the past ten years, and contended that they were entitled, now that the railway companies and the public were beginning to appreciate the value of the invention, to an extension of the patent, in order to reimburse themselves and secure that fair remuneration to which they were entitled.

Mr. R. Stephenson, M.P., was examined in support of the petition. He said he was consulting engineer to nearly all the narrow-gauge lines—that a good many hundred miles of railway were under his superintendence, including the London and North-Western and the North Midland. His attention was first called to the patent axles shortly after the opening of the North Midland in 1841. He had subjected a great many axles, of various manufactures, to some very severe trials—the patent axles among others—by twisting them and letting heavy weights fall upon them, the aim of the experiments being to subject them to the same shocks and strains that they would be liable to in case of accident. He made these experiments in consequence of a serious accident that took place on the North Midland, and was satisfied by them of the great superiority of the patent axles. Witness then described the old and the patent process of manufacture, the former rendering the iron crystalline in its structure and exceedingly brittle, while by the latter the fibrous character of the iron was preserved, by which it was rendered extremely tenacious. A section of a patent axle was put into the witness' hand, which, he said, clearly indicated the fibrous structure of the mass to the very centre of the axle. By the old method the outside, and to some depth, was fibrous, and the interior crystalline. It was hardly possible to appreciate the value of the invention—in the safety it conferred upon life and property—in the prevention of accidents upon railways. He knew of no other axle at all equal to it. After the occurrence of the accident to which he had referred, he broke upwards of fifty of the axles of the old manufactures, and was astonished to find that they were uniformly crystalline in their texture, with one or two exceptions. They were of course all exceedingly brittle, so much so that he ordered them to be taken off the line as quickly as possible. The patent axles are now extensively, but he could not say exclusively used on the North Midland. The cost of manufacture might be somewhat more than the old method, and as the patent axles were sold at a lower price than the old manufactures, the proprietors must have obtained much less profit. The price, however, was comparatively no object. He had recommended that the patent axles should be adopted in all the contracts he had had for the last three years. If his advice was followed there ought to be no other axles used. With the exception of two or three, all the axles of the old manufacture that he tested, amounting to fifty or sixty, were unsafe to use. An accident to a luggage train might entail one to a passenger train, by blocking up the line. The Low Moor and Bowling Company's axles always had a high standing in the market, from the character of the iron, and they still stand high, putting out of question the principle of manufacture.

Lord Brougham and Lord Langdale expressed themselves perfectly satisfied with the evidence they had heard. It was quite conclusive.

Mr. Hill would just ask a few questions of Mr. McConnell.—He (Mr. McConnell) was superintendent of the locomotive department of the London & North-Western, and took part in some experiments that were made in 1843, upon axles. Before the patent axles came into use the Low Moor and Bowling Works axles were considered the best. The price of these axles was from 20s. to 25s. per cwt., increasing a little according to the size. The price of Mr. Hardy's axles was now 18s. per cwt., also increasing according to weight. Before 1843 they were used to some extent, but in that year he was called upon to witness some experiments at Wolverton, which quite established their character.

Mr. Hardy, the patentee, in reply to a question by Lord Brougham, stated that he had given the matter as much publicity as possible, but his means were limited. He found it extremely difficult to induce the railway companies even to test his axles. It was owing to the energy and enterprise of the present proprietors that they had been tested, and then so generally adopted.

After some witnesses had been examined relative to the value of the plant and machinery, and the profit and loss account for the last four years,

Mr. McConnell was recalled, at the request of Lord Brougham, and stated that he considered the patent axles much more suitable than the old manufacture. In consequence of the great strain and wear and tear, he considered it advisable to take them off every five to seven years, depending upon the quantity of work which each did. He believed nearly all the carriages in the southern division of the London and North-Western had got patent axles. There was not more than a tenth or a twelfth of the entire that had the old axles. He believed all, or nearly all, the Great Western carriages had got them; he could not speak positively with regard to other lines.

Mr. Welsby, on behalf of the Attorney-General, having stated that he had no objection to urge to the prayer of the petition, the room was cleared, and on our re-admission,

Lord Brougham said the judges had unanimously agreed to recommend to Her Majesty to grant an extension of the patent for five years, subject to certain conditions, viz: that Mr. Hardy, the patentee, should secure one half of the profits and that the proprietors should give an undertaking that the price of the axles should not be increased to the public, but that it should be regulated by the rise and fall of the price of iron in the market.

Philadelphia and New York.

The number of new buildings erected annually in any place, appears to be the only way of ascertaining its actual growth. If this theory is correct, then we can show conclusively, that the growth of Philadelphia is much more rapid than that of the city of New York. It is well known that in Philadelphia, the compactly built part of the city is divided into municipal districts—as the City proper, Northern Liberties, Kensington, Spring Garden, South Penn, Southwark, Moyamensing, &c., but all forming one city, the same as London, which includes a number of districts besides the city proper. In New York, we include the whole of Manhattan Island.

In Philadelphia, during the year 1848, the number of new buildings erected, according to the official returns from the different districts, were as follows:

City proper.....	531 buildings.
Northern Liberties.....	144 "
Spring Garden.....	473 "
Penn District.....	219 "
Kensington.....	456 "
Richmond.....	187 "
Southwark.....	268 "
Moyamensing.....	223 "
West Philadelphia.....	84 "

Total.....2,585 buildings.

In addition to the permits granted above, it is known that in Spring Garden there were upwards of one hundred buildings erected without permits, the materials being deposited on lots instead of the streets. In Kensington about one hundred and fifty houses were built without permits; in Southwark and Moyamensing, about one hundred more, which would increase the total number to three thousand buildings.

In New York, according to the returns in the office of the City Inspector, the total number of new buildings erected in 1848, were, 1,191, viz:

Wards.	Buildings.	Wards.	Buildings.
1.....	6.....	10.....	39
2.....	23.....	11.....	117
3.....	45.....	12.....	83
4.....	30.....	13.....	25
5.....	33.....	14.....	22
6.....	40.....	15.....	87
7.....	58.....	16.....	185
8.....	50.....	17.....	151
9.....	102.....	18.....	92

Total number of buildings...1,191

Philadelphia, prior to 1820, for nearly half a century, was the leading city of the Union, in population, wealth and commerce. Her canvass whitened every sea, and the flags of all nations were displayed in her port. About that period her commerce began to decline, and the completion of the Erie Canal gave so powerful an impetus to the trade

of New York, that she has completely outstripped her sister city. The population of New York has since rapidly increased, and her commerce, both foreign and domestic, has increased in a still greater ratio. Belonging generally to the same political party with those having control of the General Government, liberal appropriations were made for fostering and increasing her prosperity—forts were built, numerous lighthouses were erected, and piers and buoys were placed wherever they were required. Large appropriations were made for building custom-houses &c. Aided by the immense patronage of the general government, New York has been, for the last twenty years, the leading city on this continent, and the great centre of the commerce of the United States.

Philadelphia, on the contrary, has received no aid from the government, because she opposed its measures. No piers have been built in the Delaware river, between this city and the ocean—even those at Reedy Island, which were ceded to the National Government, on the express condition of keeping them in repair, have been suffered to rot, and are now useless. No lighthouses, save one on the Brandywine Shoals, (which was washed away,) have been erected to warn the tempest tossed mariner of his danger, and instances, unfortunately, are not uncommon, where vessels and cargoes have been lost for want of these beacons.

Recently, a change in her business has commenced, and the departed glory of Philadelphia is fast returning. The recent developments of the inexhaustible resources of Pennsylvania in coal and iron are destined to bring back her trade, and to make Philadelphia the great manufacturing and producing city of the Union. Her population is increasing more rapidly than that of New York. The tonnage employed in her Coal Trade, still in its infancy, is now one third greater than the total tonnage arriving at New York from foreign ports, and this trade is destined to increase rapidly, for coal is indispensable to the wants of man. Philadelphia possesses the shortest and best route to the West, and upon the completion of the Pennsylvania Railroad, the produce of the teeming West will pour into her lap. The provision trade of the Union will centre here, and the shortest and best route from New York to Cleveland, Ohio, will then be through Philadelphia. The completion of this work will place this city in her former position as the first city in the Union, in wealth in manufactures, and the arts, as she already is in population.—*Phila. Com. List.*

Pennsylvania.

In the last number of the *Philadelphia Commercial List*, we find a very interesting report of the proceedings of the Philadelphia Board of Trade.—Some extracts from which we are happy to transfer to our journal:

The Board made an unsuccessful effort during the session of our State Legislature last year, to obtain the passage of a law authorising corporations of associated individuals for manufacturing purposes; similar applications were also numerous presented from the citizens. It is well known that, in some branches of manufactures the capital required to carry them on successfully, is too great for individual enterprise. In several of our sister states, as Massachusetts, &c., companies have been chartered very advantageously to themselves and the public. This system has enabled the inhabitants of that state to build up towns and cities, and to become the most successful manufacturers in the Union; spreading wealth and prosperity over a smiling and thrifty community, exceeded by none in the United States; subjecting other states to be tributary to her unsurpassed prosperity, and increasing in an equal ratio the commerce of her commercial capital. New York has recently, and wisely, passed similar laws. Pennsylvania, from her central position, her rich agricultural products, her proximity to the great West, the Lakes and the Ocean, added to her inexhaustible supplies of coal and iron; possesses advantages for manufacturing purposes, greater than state in the Union. Capital alone, is wanting, to enable her citizens to take advantage of her peculiar situation. This subject is deemed so important, that another application for such a law is about being made to the present Legislature, with every prospect of being successful.

The Pennsylvania Railroad, in the construction of which the board has taken a deep interest, is rapidly progressing, and by the 1st of next May, it is expected that the road will be open for travel from Harrisburg to Lewistown. From the strong interest awakened in Ohio, there is every probability that the road will be continued from Pittsburgh to Cincinnati, and ultimately to St. Louis.

The following statistical tables are of great interest, as showing the progress of the Iron and the Coal Trade.

THE IRON TRADE.

The supplies of Iron sent forward from the interior of this State, in 1847 and 1848, have been as follows:—

1848.	Bar and sheet.	Pig and scrap.	Castings & blooms.	Nails & spikes.
Route.	pounds.	pounds.	pounds.	pounds.
Chesapeake and Delaware canal.....	14,988,260	88,713,098	5,536,410	1,370,293
Delaware canal, Bristol.....	1,117,515	50,733,874	109,227	*1,338,415
Schuylkill navigation.....	10,223,860	29,205,120	3,071,040	1,485,120
Columbia and Reading railroads.....	18,730,700	7,347,400	4,229,705	7,119,600
Norristown railroad.....	5,866,288	2,564,108	1,672,780	1,672,785
Totals.....	50,926,123	178,563,600	14,619,162	12,986,213

* Including 1,337,225 pounds of wire.

1847.	Pig and scrap.	Bar, boiler and sheet.	Castings & blooms.	Nails & spikes.
Route.	pounds.	sheet, pounds.	pounds.	pounds.
Chesapeake and Delaware canal.....	79,593,539	18,058,491	10,172,757	.....
Delaware canal, Bristol.....	46,558,206	337,852	461,815	.....
Schuylkill navigation.....	15,963,480	8,442,560	3,339,480	1,966,720
Columbia and Reading railroads.....	14,778,510	20,725,040	1,537,330	8,743,480
Norristown railroad.....	7,902,720	3,184,320	2,262,400	.....
Total.....	164,796,455	60,738,263	17,774,143	10,710,100

The following is a comparative statement of the amount of Foreign Iron imported at this port during the last five years:

	1844.	1845.	1846.	1847.	1848.
Railroad.....	Tons. 8,862 19	2,797 10	73 14	.....	383 13
Rolled bar.....	2,732 17	2,433 03	2,244 17	2,736 01	4,124 01
Sheet, rod and hoop.....	587 05	197 06	499 06	1,686 12	1,782 16
Pig.....	993 18	999 10	226 03	440 18	6,658 18
Old and scrap.....	11 08	23 16	26 11	52 11	307 11
Castings.....	147 06	84 15	94 17	54 04	71 15
Chains, etc.....	142 10	08	8 10	152 04	124 09
Steel.....	143 03	311 03	287 16	273 17	406 15
Anvils.....	58 04	69 05	85 16	68 12	88 15
Nails and spikes.....	10 17	14 05	22 03	23 07	30 08
Hammers.....	2 10	2 07	2 19	1 01	4 16
Wire.....	4 03	3 02	2 03	3 03	15 18

The following table, taken from the "Commercial List," shows the supplies sent annually from the different coal regions:

Table showing the quantity of Anthracite Coal sent to market annually, from its commencement in 1820 to 1848, inclusive. Prepared from official documents.

Years.	Total Lehigh. Tons.	Total Schuylkill. Tons.	Lacka- wana. Tons.	Pine Grove. Tons.	Lyken's Valley. Tons.	Shamo- kin. Tons.	Wyom- ing. Tons.	Total Supply. Tons.
1820.....	365	.....	.....	.....	.....	.....	.....	365
1821.....	1,073	.....	.....	.....	.....	.....	.....	1,073
1822.....	2,441	.....	.....	.....	.....	.....	.....	2,440
1823.....	5,823	.....	.....	.....	.....	.....	.....	5,823
1824.....	9,541	.....	.....	.....	.....	.....	.....	9,541
1825.....	28,396	6,500	.....	.....	.....	.....	.....	34,896
1826.....	31,280	16,767	.....	.....	.....	.....	.....	48,047
1827.....	32,074	31,360	.....	.....	.....	.....	.....	63,434
1828.....	30,232	47,281	.....	.....	.....	.....	.....	77,516
1829.....	25,110	79,973	7,000	.....	.....	.....	.....	112,083
1830.....	41,750	89,994	42,700	.....	.....	.....	.....	174,734
1831.....	40,966	81,854	54,000	.....	.....	.....	.....	176,820
1832.....	75,000	209,271	84,500	.....	.....	.....	.....	368,771
1833.....	123,000	252,971	111,777	.....	.....	.....	.....	487,748
1834.....	106,214	226,692	43,700	.....	.....	.....	.....	376,636
1835.....	131,250	339,508	98,845	5,500	.....	.....	.....	575,103
1836.....	146,522	432,045	104,500	9,978	5,439	.....	.....	698,484
1837.....	225,937	523,152	115,387	16,726	6,430	.....	.....	887,632
1838.....	214,211	433,875	76,321	16,665	6,005	4,104	.....	746,181
1839.....	222,042	442,608	122,300	19,227	5,372	11,930	.....	823,479
1840.....	225,591	452,291	148,470	19,463	5,302	15,928	.....	867,045
1841.....	*142,807	585,542	192,270	15,306	6,176	22,154	.....	964,255
1842.....	271,913	541,504	205,253	31,437	181	10,098	47,346	1,107,732
1843.....	267,125	677,313	227,605	22,879	.....	9,870	57,740	1,262,532
1844.....	376,363	840,379	251,005	27,719	.....	13,087	114,906	1,623,459
1845.....	430,993	1,086,068	266,072	31,208	.....	10,135	178,401	2,002,877
1846.....	522,518	1,236,581	318,400	55,346	.....	12,646	188,003	2,333,494
1847.....	643,568	1,572,794	388,200	61,243	.....	14,904	289,898	2,970,597
1848.....	680,193	1,652,834	434,267	56,938	2,000	.....	237,271	3,063,503
Totals.....	5,505,327	11,859,150	3,392,572	384,625	36,905	124,856	1,113,565	22,417,000

* Great freshet which injured the canal. † Less Shamokin mines.

The Iron trade has suffered more seriously, being brought directly in competition with Foreign Iron, which has been selling below the cost of production. Prices have materially declined since 1848. Many of the Rolling mills in the interior of the State are not in operation.

From the Baltimore American.

Society for the Development of the Mineral Resources of the United States.

An association of gentlemen with the above title has been organized in Philadelphia, and at a monthly meeting held on the 2d instant, accepted the charter granted them by the Legislature of Pennsylvania. The charter declares the object of the corporation to be to collect and preserve specimens of all the rocks and minerals of the United States, useful in agriculture, architecture, manufactures and the arts; to offer them for free inspection; to cause to be disseminated useful information upon economical mineralogy and geology, and to introduce into use American mineral productions. The society is also empowered to appoint teachers and professors of mineralogy, geology and mineralogical chemistry, and to grant diplomas of membership, honorary membership, and professorships. The following is the list of officers to serve until the next semi-annual election, viz:

P. A. Browne, President; George Chambers, William Darlington, Edward Swift, James S. Craft, Jonas P. McClintock, Vice Presidents; M. W. Dickeson, Corresponding Secretary; Samuel R. McClintock, Recording Secretary; Thomas Gilpin, Treasurer; M. W. Dickeson and Algernoon S. Roberts, Curators; B. B. Young, Jesse R. Burden, Samuel Moore, Richard Burr, Charles B. Penrose, William Rawie, Eli K. Price, Alernon S. Roberts, Richard C. Taylor, George M. Dallas, T. A. Comly, and Charles Gilpin, Managers.

At a meeting on the second instant the following donations to the cabinet of the society were made: Three fine polished specimens of Marble from Alabama, from B. F. French, Esq.

Two Mineralogical specimens from E. A. Bulkly, Esq., of Wilkesbarre, which, with their accompanying letter, were referred to a committee.

A suite of 50 fine specimens, illustrating the Geology of the Flemington Copper Mines, from Fred'k. Van Dyke, M. D.

Specimens of hydrated per oxide of iron from Upper Freehold, Monmouth county, N. J., by the Rev. J. H. Avery.

A splendid specimen of tubulated iron ore, three feet long, from the interior of Pennsylvania, by M. J. A. Comly, Esq.

Among the resolutions passed was one appointing a committee of ten members to inquire into the expediency of holding on the 4th, 5th and 6th days of June next, a public exhibition of specimens tending to show the mineral resources of the United States. The committee are to communicate with gentlemen at a distance and to ascertain to what extent they will aid the society in making the exhibition. The following are the names of the gentlemen comprising the committee:

P. A. Browne, George Chambers, W. Darlington, James S. Craft, Jonas P. McClintock, Edward Swift, A. S. Roberts, M. W. Dickeson, Frederick Van Dyke and Col. B. B. Long.

After the election of several honorary and other members, the society adjourned, to meet on the first Friday in April next.

The objects of the association are truly laudable, and we doubt not that the gentlemen comprising it will receive the cordial co-operation not only of men of science throughout the Union, but of all who feel an interest in the development of the mineral resources of the country.

Massachusetts Railroads.

We are indebted to a valued friend, for a copy, at the earliest moment of publication, of the Annual Returns of the several Railroad corporations in operation within the commonwealth of Massachusetts. The following analysis of them is presented to our readers.

The returns of the 37 corporations show their capital stock to be.....\$50,004,100 00
Add the Hartford and New Haven..... 60,000 00
Add the Framingham branch..... 200,000 00

Total.....\$40,264,100 00

The amount of capital paid in.....\$37,009,560 95
Providence and Wor-

chester, say.....	1,232,000 00
Pittsfield and N. Adams say.....	447,755 45
Hartford and New Ha- ven, say.....	60,000 00
	38,749,316 40

Difference.....	11,514,783 60
The cost of the several railroads as appears by the returns, is.....	\$46,777,009 84
Add the Hartford and New Haven.....	60,000 00
Fitchburg and Worcester, in part, per items in return.....	49,982 09
	46,886,991 93

The debt of the several corporations, as per return, is.....	\$12,420,201 19
The aggregate surplus fund is.....	1,349,230 08

Difference.....	11,070,971 11
The earnings of the several corpora- tions were.....	6,067,154 02

The expense of working the several roads was.....	3,284,933 38
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The net earnings of the same.....	2,716,920 30
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The difference between the sum of the last two items and the gross earnings, being.....	65,300 34
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The dividends, as per returns, amount to the sum of.....	\$2,074,147 50
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To this sum should be added the divi- dent upon the W. Stockbridge, say.....	1,900 00
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Net earnings of the Pittsfield and N. Adams road.....	10,851 68
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Hartford and New Haven dividend, say 8 per cent.....	4,800 00
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Dorchester and Milton, 6 per cent. on cost of road.....	6,853 62
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Cape Cod, say 2 per cent on cost of road	11,742 32
--	-----------

Total dividends.....	2,110,295 12
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Amount carried to surplus funds, by 9 roads was.....	270,816 31
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Amount deducted from surplus fund by seven roads was.....	55,283 18
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Surplus fund increased.....	215,533 13
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Cost. Main track. Br.	
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Berkshire.....	\$600,000 00	21-137
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Boston and Lowell.....	2,013,687 40	25-761 1-861
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Boston and Maine.....	3,571,832 04	74-260 5-080
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Boston and Providence.....	3,031,106 72	41-000 6-600
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Boston and Worcester.....	4,650,392 84	44-625 30-000
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Cape Cod branch.....	587,116 01	27-800
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Cheshire.....	1,905,456 81	53-646
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Connecticut River.....	1,588,184 65	50-000 2-350
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Dorchester and Milton.....	114,224 27	3-246
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Eastern.....	3,095,393 87	38-201 19-875
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Essex.....	421,574 62	22-500
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Fall River.....	1,145,982 93	42-242
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Fitchburg.....	2,945,630 98	49-343 6-779
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Lexington & W. Cam.....	252,680 79	6-632
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Lowell and Lawrence.....	283,248 61	12-350
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Nashua and Lowell.....	525,063 42	14-583
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N. Bedford & Taunton.....	499,965 58	20-130 0-947
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Norwich & Worcester.....	2,187,829 21	59-000 7-000
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Old Colony.....	2,080,903 00	37-250 7-750
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Peterboro' and Shirley.....	208,311 30	12-014
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Pittsfield and N. Adams.....	447,755 45	18-650
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Providence and Wor.....	1,873,895 76	43-500
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South Shore.....	255,748 71	11-500
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Stoney Brook.....	246,659 76	13-160
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Taunton branch.....	305,085 78	11-000 0-568
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West Stockbridge.....	41,516 29	2-750
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Western.....	7,975,452 09	117-804
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Worcester & Nashua.....	1,010,537 78	39-020
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	43,865,236 67	913-104 88-810
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Length of main track.....	913-104	
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" branches.....	88-810	
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Total, main track and branches.....	1,001-914	
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Mean cost per mile of all finished
roads in operation, is.....\$43,781 44

This includes 220,210 of double track, together
with depot lands, depot, and furniture. In the above

enumeration is included all the roads whose termi-
nus is in Boston, and whose real estate makes an

important item of their cost, as will be seen in the
following statement of expenditures for stations,

buildings and fixtures, by the roads named, to wit:

Boston and Lowell.....\$354,612 55

Boston and Maine.....373,586 82

Eastern.....448,308 53

Fitchburg.....358,098 40

Old Colony.....198,731 63

\$1,733,337 93

The Boston and Providence, and Boston and
Worcester, are not included in the above owing to

the deficiency of their returns. The addition of
their expenditures to the above sum would, it is sup-

posed, much increase the average.

The following corporations do not return divi-
dends, viz:—

Cheshire.....\$1,700,000 In operation.

Essex.....700,000 Run by Eastern.

Fitchburg and Wor-
cester.....500,000 Constructing.

Fram'ham Branch... 200,000 Organized merely.

Grand Junction &c.. 1,200,000 Constructing.

Lex. & W. Cam'... 200,000 Run by Fitchburg.

Lowell & Lawrence.. 300,000 In operation.

Newburyport..... 250,000 Constructing.

Norfolk County.... 700,000 Constructing.

Norwich and Wor.. 2,200,000 In operation.

Peterboro' & Shirley.. 275,000 Leased to Fitchg.

Providence & Wor.. 1,232,000 In operation.

South Shore..... 600,000 Les'd to Old Col.

Stoney Brook..... 300,000 Les'd to Nashua.

Vermont & Mass... 3,200,000 In operation.

Wor. & Nashua.... 1,800,000 In operation.

Making a sum of...\$15,357,000

Of the above roads, the Cheshire has been com-
pleted since the last return.

Essex was opened for travel in the summer of '48.

Lowell and Lawrence opened July 1, 1848.

Peterborough and Shirley is leased at a rent of
6 per cent. to be, in a certain event, increased to 7.

South Shore is leased to the Old Colony at 6 per
cent.

Stony Brook is leased at 6 per cent., and half the
surplus earnings.

Vermont and Massachusetts completed since re-
turn.

Worcester and Nashua opened in the autumn of
1848.

The length of the main road is..... 954.346 miles.

The length of branches is..... 88.810 "

Total.....1,043.156 "

The length of double track..... 220.212 "

The average speed of passenger cars is 23.13
miles per hour.

The average speed of freight cars is 12.35 miles
per hour.

The casualties—56 killed, 65 injured

During the past year, about 300 miles of railroad
have been put in operation on the various lines

leading to Boston, many of which are far from be-
ing completed.

The miles of railroad finished in New York, it is
believed, do not exceed 750.

The whole number of miles in the United States
is stated at 6,421 $\frac{1}{2}$, of which nearly one sixth part is
in Massachusetts.

The extent of railroad finished in England, at the
end of the year 1848, and in operation, was 4,420
miles, constructed at a cost of £131,000,000 sterling,
or \$628,000,000.

The average cost per mile is about \$142,000.

These roads are thoroughly built, generally with
two or more tracks.

There is no road in this country which cost the
average of the English lines, excepting perhaps, the
Reading railroad, in Pennsylvania.

The traffic on the English roads, in 1848, amount-
ed to £10,092,000, or more than \$47,000,000.

The net returns were about 4 24-100 per cent. on
the outlay.

The expense of working the English roads is less
than fifty per cent. of the gross earnings.

The expense of working the Massachusetts roads
is a fraction over fifty-four per cent.

If the returns from the several roads have been
perfect, no table made from the list would have
shown the average dividends of the whole. The

fact that many of them have come into operation
during the past year, is sufficient to show that no
average could be taken of the whole, which would
make any approach to exactness.

The committee have taken thirteen roads, (upon
whose returns reliance can be placed, and none of
which commenced operations within the year,) and
averaged the dividends upon the cost of the roads.

COST. DIVIDENDS.

Berkshire.....\$600,000 00 \$42,000 00

Boston and Lowe l.....1,800,000 00 144,000 00

Boston and Maine.....3,249,804 52 252,798 50

Boston and Providence..2,893,300 00 175,349 00

Boston and Worcester..4,245,175 00 325,500 00

Connecticut River.....1,234,970 00 69,960 00

Eastern.....2,655,700 00 239,628 00

Fall River.....1,050,000 00 68,250 00

Fitchburg.....2,735,910 00 201,029 50

Nashua and Lowell... 525,000 00 50,000 00

N. Bedford & Taunton..400,000 00 24,000 00

Old Colony.....1,601,415 00 91,362 50

Stoughton Branch..... 85,400 00 4,270 00

Taunton Branch..... 250,000 00 20,000 00

Western.....5,150,000 00 366,000 00

\$28,476,674 52 \$2,074,147 50

Mean rate per cent. upon money paid in, 7.283.

The above is an approximation to correctness,
though not entirely accurate. The Western road,
for instance, paid 8 per cent; by the table, it is less.

The discrepancy is caused by the fact, that new
stock has been created the present year and has been
expended in construction, thus adding both to capi-
tal and cost of road during the year, while one of
the semi-annual dividends was declared upon the
last year's capital. The dividends are declared
upon the capital paid in and not always upon the
cost, and this will show a difference between the
table and the actual dividend, in cases where the
cost of the road varies from the amount of capital
paid in. It should be added, that, in all statements
relative to the Western railroad, the dividends are
reckoned upon its chartered capital which now
stands at \$5,150,000. In addition to which there
has been provided for its construction, and received
by the corporation, £899,900 sterling bonds, payable
with interest, at 5 per cent., sold at an advance of
not less than 8 per cent.—\$4,319,520; Albany city
bonds, \$1,000,000, interest 5 per cent., making the
total means provided for its construction, \$10,469,-
520, from which there has been paid, into the several
sinking funds, \$459,578, 62, leaving for con-
struction and equipment of road, \$10,009,941 38.

The cost of the road to the date of the return is
\$9,900,153 76 leaving in possession of the corpora-
tion a balance of construction funds amounting
to \$109,787 62. The balance of interest paid by
the corporation the past year is \$266,380 77. The
first dividend was declared upon forty thousand
shares, the second, upon fifty-one thousand and five
hundred, and were each four per cent. Of the sur-
plus of \$47,330 41, \$45,833 34 must be paid into
the general sinking fund, which will leave the sum
of \$1,497 07 to be added to surplus fund of former
years.

By the report of the commissioners

of the sinking fund of the Western
railroad, it appears that the amount
of the fund on the 31st day of De-
cember, 1847, as per commis-
sioners' report of that date, was.....\$409,592 71

And there was received during the
year 1848, in interest and divi-
dends.....\$23,839 98

Of Western railroad cor-
poration, 1 per cent. on
\$4,000,000..... 40,000 00

Showing an increase of..... 63,839 98

Amount of fund, December 31, 1848...\$473,432 69

Abstract from the Several Returns,

NAMES OF ROADS.	Capital.	Capital paid in.	Cost.	Length.	Length of double track.	Length of branches.	Speed of passenger trains.
Barre and Worcester.....	\$1,000,000 00						
Berkshire.....	600,000 00	600,000 00	\$600,000 00	21-137			22-00
Boston and Lowell.....	1,800,000 00	1,800,000 00	2,313,687 40	25-761	25-761	1-861	24-9 } Expr. 28-2 { 22-00
Boston and Maine.....	4,107,500 00	3,249,804 52	3,571,832 04	74-26	13-50	5-08	30-00
Boston and Providence.....	3,160,000 00	2,893,300 00	3,031,106 72	41-00	15-75	6-60	22-00
Boston and Worcester.....	4,500,000 00	4,245,175 00	4,650,392 84	44-625	44-625	22-00 single, } 8-00 double }	22-24
Cape Cod Branch.....	500,000 00	343,000 00	587,116 01	27-800			23-00
Cheshire.....	1,700,000 00	1,401,739 50	1,905,456 81	53-646			21-50
Connecticut River.....	1,500,000 00	1,234,970 00	1,588,184 65	50-000		2-35	
Dorchester and Milton.....	130,000 00	72,990 00	114,224 27	3-246	Leased to	Old Colony Railroad.	
Eastern.....	3,150,000 00	2,655,700 00	3,095,393 87	38-201	16-00	19-875	21-00
Essex.....	700,000 00	263,746 00	421,574 64	22-500			20-00
Fall River.....	1,050,000 00	1,050,000 00	1,145,982 93	42-242			22-50
Fitchburg.....	3,320,000 00	2,735,910 00	2,945,630 98	49-343	17-00	6-537 single, } 0-242 double }	25-00 } 20-00 }
Fitchburg and Worcester.....	500,000 00	52,184 00	Unfinished,	and not in	operation.		
Framingham Branch.....	Organized	June 21, 1848.	Road not	commenced.			
Grand Junction Railroad and Depot Company.....	1,200,000 00	538,291 66	Unfinished,	and not in	operation.		
Hartford and New Haven.....				5-87	0-50		25-00
Lexington and West Cambridge.....	200,000 00	118,460 00	252,680 79	6-632	Leased to	Fitchburg Co.	
Lowell and Lawrence.....	300,000 00	200,000 00	283,248 61	12-35			25-00
Nashua and Lowell.....	600,000 00	525,000 00	525,063 42	14-583	14-202		28-00
New Bedford and Taunton.....	400,000 00	400,000 00	409,965 58	20-13		0-947	24-00
Newburyport.....	250,000 00	4,140 00	1,992 21		Unfinished, and	not in operation	
Norfolk County.....	700,000 00	414,256 53	621,488 75	25-965	Not in operation.		
Norwich and Worcester.....	2,200,000 00	1,658,500 00	2,187,829 21	59-000	1-80	7-00	22-20
Old Colony.....	2,000,000 00	1,601,415 00	2,080,903 00	37-250	11-50	7-75	20-00
Peterborough and Shirley.....	275,000 00	143,460 00	208,311 30	12-014	Leased to	Fitchburg Railroad.	
Pittsfield and North Adams.....	500,000 00		447,755 45	18-65	0-70		20-00
Providence and Worcester.....	1,232,000 00		1,873,895 76	43-50	5-00		19-00
South Shore.....	600,000 00	135,935 00	255,748 71	11-50	Opened Jan. 1, 1849.	Run by	Old Colony.
Stoney Brook.....	300,000 00	216,829 00	246,659 76	13-16	Leased to Nashua and Lowell	Railroad.	
Stoughton Branch.....	90,000 00	85,400 00	91,535 01				
Taunton Branch.....	250,000 00	250,000 00	305,085 78	11-00		0-568	24-00
Vermont and Massachusetts.....	3,200,000 00	1,995,255 27	2,196,757 20	58-75	Not completed.	Leased to Fitchburg Railroad.	
West Stockbridge.....	39,600 00	39,600 00	41,516 29	2-75	Built by, and	leased to Western Railroad.	
Western.....	6,150,000 00	5,150,000 00	7,975,452 09	117-804	51-754		22-00 } 28-00 }
Worcester and Nashua.....	1,800,000 00	934,499 47	1,010,537 78	39-02	2-12		20-00
	50,004,100 00	37,009,560 95	46,777,009 84	954-346	220-212	88-810	mean 23-13

Showing the Leading Statistics of the Railroads.

Speed of freight trains.	Earnings.	Expense of working.	Net Earnings.	Dividends.	Debt.	Surplus.	Casualties.
11-00	\$42,000 00		\$42,000 00	\$42,000 00	Road leased.		Deficient.
12-00	461,339 35	\$268,707 40	192,631 95	144,000 00	\$59,530 00	\$251,106 76	4 killed and 4 wounded.
10-00	511,627 89	264,534 58	247,093 31	252,798 50	297,985 93	48,272 45	5 killed and 3 injured.
15-00	354,375 43	183,361 81	171,013 62	175,349 00	Balance of 101,258 04	74,380 58	4 killed.
9-00	716,284 11	406,203 72	310,080 39	325,500 00	259,634 17	4,490 88	4 killed and 5 injured.
12-35	35,635 22		20,679 28		217,395 68		1 killed and 3 injured.
12-00	80,033 90	47,068 44	32,965 46		698,127 97		
8-75	165,242 13	95,658 93	69,583 20	69,960 00	427,337 59	1,354 23	1 killed and 3 injured.
.....	Not stated.	Not stated.	Not stated.	Not stated.	41,234 27		
15-00	479,157 89	230,533 64	248,324 25	239,628 00	819,439 65	136,135 72	8 killed and 36 injured.
15-00	10,607 50	Worked by Eastern Railroad.			160,958 74		Deficient.
11-00	184,344 11	109,390 98	74,953 13	68,250 00	99,101 65	15,924 07	2 killed.
10-00	486,264 63	286,046 48	200,219 15	201,029 50	213,442 63	145,938 04	8 killed and 2 injured.
.....							
.....	881 57	and interest. 14,575 50			54,957 76	1,050 60	
12-00		2,660 11					
.....		9,309 11	Leased.	Leased.	127,843 81		Deficient.
12-00	20,744 06	13,711 60	7,032 46	None.	73,145 30		Deficient.
14-00	169,187 74	109,599 18	59,588 56	50,000 00	Nothing.	27,213 77	Deficient.
15-00	136,151 81	96,226 41	39,625 40	24,000 00	17,150 00	80,962 93	Deficient.
.....							
.....					233,166 79		
12-50	218,073 30	131,107 80	86,955 50	None.	974,945 05	291,267 28	Deficient.
12-50	227,350 27	139,592 81	87,757 46	91,362 50	509,463 51	8,000 00	3 killed and 3 injured.
.....			6 per cent. on capital stock.		54,496 73		Deficient.
20-00	28,319 52	17,467 84	10,851 68	Not stated.			Deficient.
9-00	193,844 42	83,889 71	109,954 71		573,058 70		4 killed.
.....				None.	128,475 50		
.....				None.	29,188 60		1 killed and 2 injured.
.....	23,699 71	17,619 13	6,080 56	4,370 00		1,964 59	Deficient.
15-00	108,101 18	90,485 30	17,615 88	20,000 00	Nothing.	28,035 01	1 killed.
.....	63,000 00	Not stated.	Not stated.	Not stated.	557,131 15		Deficient.
.....	1,963 33	60 18	1,903 15				Deficient.
12-00	1,332,068 29	652,357 11	679,711 18	366,000 00	5,319,520 00	233,133 18	10 killed and 4 injured.
9-00	16,855 66	14,465 61			372,211 97		Deficient.
12-35	6,067,154 02	3,284,933 38	2,716,920 30	2,074,137 50	12,420,201 19	1,349,230 08	96 killed and 65 injured.

ENGINEERS.

Arrowsmith, A. T.,
Buckfield Branch Railroad, Buckfield, Me.

Berrien, John M.,
Michigan Central Railroad, Marshall, Mich.

Clement, Wm. H.,
Little Miami Railroad, Cincinnati, Ohio.

Fisk, Charles B.,
Cumberland and Ohio Canal, Washington, D. C.

Felton, S. M.,
Fitchburgh Railroad, Boston, Mass.

Ford, James K.,
New York.

Gzowski, Mr.,
St. Lawrence & Atlantic Railroad, Montreal, Canada.

Gilbert, Wm. B.,
Rutland and Burlington Railroad, Rutland, Vt.

Garnett, C. F. M.,
Nashville and Chattanooga R. R., Nashville, Tenn.

Holcomb, F. P.,
Southwestern Railroad, Macon, Ga.

Higgins, B.,
Mansfield and Sandusky Railroad, Sandusky City, O.

Johnson, Edwin F.,
New York and Boston Railroad, Middletown Ct.

Jones C. F.,
South Oyster Bay, L. I.

Latrobe, B. H.,
Baltimore and Ohio Railroad, Baltimore, Md.

Morton, A. C.,
Atlantic and St. Lawrence Railroad, Portland, Me.

McRae, John,
South Carolina Railroad, Charleston, S. C.

Nott, Samuel,
Lawrence and Manchester Railroad, Boston.

Reynolds, L. O.,
Central Railroad, Savannah, Ga.

Roberts, Solomon W.,
Ohio and Pennsylvania Railroad, Pittsburgh, Pa.

Robinson, James P.,
Aandrosceggin & Kennebec Railroad, Waterville, Me.

Schlatter, Charles L.,
Northern Railroad (Ogdensburg), Malone, N. Y.

Stark, George.,
Bost., Con. and Mont. R. R., Meredith Bridge, N. H.

Trimble, Isaac K.,
Philad., Wil. & Baltimore Railroad, Wilmington, Del.

Tinkham, A. W.,
United States Fort, Bucksport, Me.

Thomson, J. Edgar.,
Pennsylvania (Central) Railroad, Philadelphia.

Whipple, S.,
Utica, N. Y.

Williams, E. P.,
Auburn and Schenectady Railroad, Auburn, N. Y.

Williams, Charles H.,
Milwaukee, Wisconsin.

MANUFACTURE OF PATENT WIRE ROPE
and Cables for Inclined Planes, Standing Ship
Rigging, Mines, Cranes, Tilters, etc., by
JOHN A. ROEBLING, Civil Engineer,
Pittsburgh, Pa.

BUSINESS CARDS.

James Laurie, Civil Engineer,
No. 23 RAILROAD EXCHANGE, BOSTON, MASS.
Railroad Routes explored and surveyed. Estimates,
Plans and Specifications furnished for Dams, Bridges,
Wharves, and all Engineering Structures.
October 14, 1848. 6m*

James Herron, Civil Engineer,
OF THE UNITED STATES NAVY YARD,
PENSACOLA, FLORIDA,
PATENTEE OF THE
HERRON RAILWAY TRACK.
Models of this Track, on the most improved plans,
may be seen at the Engineer's office of the New York
and Erie Railroad.

IRON.

Railroad Iron.

THE NEW JERSEY IRON CO'S WORKS AT
Boonton, are now in full operation, and can exe-
cute orders for Railroad Bars of any required pattern,
equal in quality to any made in this country. Apply
to
DUDLEY B. FULLER, Agent,
139 Greenwich street.
New York, October 25, 1848.

Railroad Iron.

THE UNDERSIGNED ARE PREPARED TO
contract for the delivery of English Railroad Iron
of favorite brands, during the Spring. They also re-
ceive orders for the importation of Pig, Bar, Sheet, etc.
Iron. **THOMAS B. SANDS & CO.,**
22 South William street,
February 3, 1848. New York.

Railroad Iron.

THE TRENTON IRON COMPANY ARE NOW
turning out one thousand tons of rails per month,
at their works at Trenton, N. J. They are prepared to
enter into contract to furnish rails of any pattern, and
of the very best quality, made exclusively from the fa-
mous Andover iron. The position of the works on the
Delaware river, the Delaware and Raritan canal, and
the Camden and Amboy railroad, enables them to ship
rails at all seasons of the year. Apply to
COOPER & HEWITT, Agents,
17 Burling Slip, New York.
October 30, 1848.

Railroad Iron.

THE MOUNT SAVAGE IRON WORKS, AL-
leghany county, Maryland, having recently pass-
ed into the hands of new proprietors, are now prepar-
ed, with increased facilities, to execute orders for any
of the various patterns of Railroad Iron. Communi-
cations addressed to either of the subscribers will have
prompt attention. **J. F. WINSLOW, President**
Troy, N. Y.
ERASTUS CORNING, Albany.
WARREN DELANO, Jr., N. Y.
JOHN M. FORBES, Boston.
ENOCH PRATT, Baltimore, Md.
November 6, 1848.

Railroad Spikes and Wrought
Iron Fastenings.

THE TROY IRON AND NAIL FACTORY,
exclusive owner of all Henry Burden's Patented
Machinery for making Spikes, have facilities for man-
ufacturing large quantities upon short notice, and of a
quality unsurpassed.
Wrought Iron Chairs, Clamps, Keys and Bolts for
Railroad fastenings, also made to order. A full assort-
ment of Ship and Boat Spikes always on hand.
All orders addressed to the Agent at the Factory will
receive immediate attention.
P. A. BURDEN, Agent,
Troy Iron and Nail Factory, Troy, N. Y.

Railroad Iron.

THE SUBSCRIBERS ARE PREPARED TO
take orders for Railroad Iron to be made at their
Phoenix Iron Works, situated on the Schuylkill Ri-
ver, near this city, and at their Safe Harbor Iron Works,
situated in Lancaster County, on the Susquehanna
river; which two establishments are now turning out
upwards of 1800 tons of finished rails per month.
Companies desirous of contracting will be promptly
supplied with rails of any required pattern, and of the
very best quality.

REEVES, BUCK & CO.,
45 North Water St., Philadelphia.
March 15, 1849.

Railroad Iron, Pig Iron, &c.

600 Tons of T Rail 60 lbs. per yard.
25 Tons of 2 1/2 by 1 Flat Bars.
25 Tons of 2 1/2 by 9-16 Flat Bars.
100 Tons No. 1 Gartsbrorie.
100 Tons Welsh Forge Pigs.
For Sale by **A. & G. RALSTON & CO.**
No. 4 So. Front St., Philadelphia.

Pig and Bloom Iron.

THE Subscribers are Agents for the sale of numer-
ous brands of Charcoal and Anthracite Pig Iron,
suitable for Machinery, Railroad Wheels, Chains, Hol-
lowware, etc. Also several brands of the best Pud-
dling Iron, Juniata Blooms suitable for Wire, Boiler
Plate, Axe Iron, Shovels, etc. The attention of those
engaged in the manufacture of Iron is solicited by
A. WRIGHT & NEPHEW,
Vine Street Wharf, Philadelphia.

T. & C. Wason,

MANUFACTURERS OF EVERY STYLE OF
Freight and Baggage Cars—Forty rods east of
the depot Springfield, Mass.
Running parts in sets complete. Wheels, axles, or
any part of cars furnished and fitted up at short notice
and in the best manner.
N. B. Particular attention paid to the manufacture
of the most improved Freight Cars. We refer to the
New Haven, Hartford and Springfield; Connecticut
River; Harlem; Housatonic; and Western, Massachu-
setts, Railroads, where our cars are now in constant use.

SCHENECTADY LOCOMOTIVE WORKS,
SCHENECTADY, N. Y.

THE undersigned is prepared to execute orders for
Locomotive Steam Engines and Tenders; and
from long experience in building, can furnish machines
of most superior workmanship. The Works are very
large, and conveniently situated near the line of Rail-
road leading to Buffalo, and can furnish Locomotive
Tenders and Railroad Machinery at short notice.
E. S. NORRIS.
February 24, 1849.

Mattewan Machine Works.

THE Mattewan Company have added to their Ma-
chine Works an extensive LOCOMOTIVE ENGINE
department, and are prepared to execute orders for Lo-
comotive Engines of every size and pattern—also Ten-
ders, Wheels, Axles, and other railroad machinery, to
which they ask the attention of those who wish such
articles, before they purchase elsewhere.

STATIONARY ENGINES, BOILERS, ETC.,
Of any required size or pattern, arranged for driving
Cotton, Woollen, or other Mills, can be had on favora-
ble terms, and at short notice.

COTTON AND WOOLLEN MACHINERY,
Of every description, embodying all the modern im-
provements, second in quality to none in this or any
other country, made to order.

MILL GEARING,
Of every description, may be had at short notice, as
this company has probably the most extensive assort-
ment of patterns in this line, in any section of the
country, and are constantly adding to them.

TOOLS.
Turning Lathes, Slabbing, Planing, Cutting and
Drilling Machines, of the most approved patterns, to-
gether with all other tools required in machine shops,
may be had at the Mattewan Company's Shops, Fish-
kill Landing, or at 39 Pine street, New York.
WM. B. LEONARD, Agent.

WILLIAM JESSOP & SONS'
CELEBRATED CAST-STEEL.

The subscribers have on hand, and are constantly re-
ceiving from their manufactory,

PARK WORKS, SHEFFIELD,
Double Refined Cast Steel—square, flat and octagon.
Best warranted Cast Steel—square, flat and octagon.
Best double and single Shear Steel—warranted;
Machinery Steel—round.

Best and 2d gy. Sheet Steel—for saws and other pur-
poses.
German Steel—flat and square. "W. I. & S." "Eagle"
and "Goat" stamps.

Genuine "Sykes" L. Blister Steel.
Best English Blister Steel, etc., etc., etc.
All of which are offered for sale on the most favora-
ble terms by **WM. JESSOP & SONS,**
91 John street, New York.
Also by their Agents—

Curtis & Hand, 47 Commerce street, Philadelphia.
Alex. Fullerton & Co., 119 Milk street, Boston.
Stickney & Beatty, South Charles street, Baltimore.
May 6, 1848.

**Direct Action Engines
FOR STEAMBOATS.**
THE PATENT DOUBLE CYLINDERS,
AND ALSO
THE ANNULAR RING PISTON ENGINES,
of Messrs. Maudslay, Sons & Field, of London, may
be built in the United States, under license, which can
be obtained of their agent.

THOMAS PROSSER, C. E.
28 Platt street, New York.

May 6, 1848.

LAP-WELDED WROUGHT IRON TUBES
for Tubular Boilers, from 14 to 15 inches diame-
ter, and any length not exceeding 17 feet—manufac-
tured by the Caledonian Tube Company, Glasgow, and
for sale by **IRVING VAN WART,**
12 Platt street, New York.

JOB CUTLER, Patentee.

These Tubes are extensively used by the British
Government, and by the principal Engineers and Steam
Marine and Railway Companies in the Kingdom.

Norwich Car Factory,
NORWICH, CONNECTICUT.

At the head of navigation on the River Thames, and
on the line of the Norwich & Worcester Railroad,
established for the manufacture of

RAILROAD CARS,
OF EVERY DESCRIPTION, VIZ:
PASSENGER, FREIGHT AND HAND CARS,
ALSO, VARIOUS KINDS OF
ENGINE TENDERS AND SNOW PLOUGHS.

Furnished and fitted at short notice.

Orders executed with promptness and despatch.

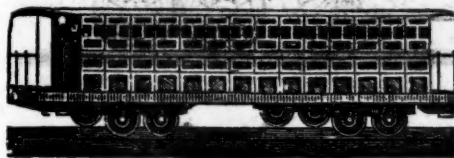
Any communication addressed to
JAMES D. MOWRY,

General Agent,
Norwich, Conn.,

Will meet with immediate attention.

178

CAR MANUFACTORY,
CINCINNATI, OHIO.



KECK & DAVENPORT would respect-
fully call the attention of Railroad Companies in the
West and South to their establishment at Cincin-
nati. Their facilities for manufacturing are extensive,
and the means of transportation to different points
speedy and economical. They are prepared to execute
to order, on short notice, Eight-Wheeled Passenger
Cars of the most superior description. Open and
Covered Freight Cars, Four or Eight-Wheel Crank
and Lever Hand Cars, Trucks, Wheels and Axles, and
Railroad Work generally.

Cincinnati, Ohio, Oct. 2, 1848.

446

DEAN, PACKARD & MILLS,
MANUFACTURERS OF ALL KINDS OF

RAILROAD CARS,

SUCH AS

PASSENGER, FREIGHT AND CRANK CARS,

— ALSO —

SNOW PLOUGHS AND ENGINE TENDERS

OF VARIOUS KINDS.

CAR WHEELS and **AXLES** fitted and furnished
at short notice; also, **STEEL SPRINGS**
of various kinds; and

SHAFTING FOR FACTORIES.

The above may be had at order at our Car Factory,

REUEL DEAN,
ELIJAH PACKARD, } **SPRINGFIELD, MASS.**
ISAAC MILLS, }

1748

**LAP—WELDED
WROUGHT IRON TUBES**

FOR

TUBULAR BOILERS,

FROM 1 1-2 TO 8 INCHES DIAMETER.

These Tubes are of the same quality and manu-
facture as those so extensively used in England,
Scotland, France and Germany, for Locomotive,
Marine and other Steam Engine Boilers.

THOMAS PROSSER,

Patentee.

28 Platt street, New York.

THE NEWCASTLE MANUFACTURING CO.
continue to furnish at the Works, situated in the
town of Newcastle, Del., Locomotive and other steam
engines, Jack Screws, Wrought Iron Work and Brass
and Iron Castings, of all kinds connected with Steam-
boats, Railroads, etc.; Mill Gearing of every descrip-
tion; Cast Wheels (chilled) of any pattern and size,
with Axles fitted, also with wrought tires, Springs,
Boxes and bolts for Cars; Driving and other wheels
for Locomotives.

The works being on an extensive scale, all orders
will be executed with promptness and despatch. Com-
munications addressed to Mr. William H. Dobbs, Su-
perintendent, will meet with immediate attention.

ANDREW C. GRAY,

a45 President of the Newcastle Manuf. Co.

**TO RAILROAD COMPANIES AND MANU-
facturers of Railroad Machinery.** The subscri-
bers have for sale American and English Bar Iron, of
all sizes; English Blister, Cast, Shear and Spring
Steel; Juniata Rods; Car Axles, made of double re-
fined iron; Sheet and Boiler Iron, cut to pattern;
Tires for Locomotive Engines, and other railroad car-
riage wheels, made from common and double refined
B. O. Iron; the latter a very superior article. The
Tires are made by Messrs. Baldwin and Whitney, Lo-
comotive Engine Manufacturers of this city. Orders
addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in
the order, a fit to those wheels is guaranteed, saving
to the purchaser the expense of turning them out in-
side.

THOMAS & EDMUND GEORGE,

a45 N. E. cor. 12th and Market sts., Philad., Pa.

**NICOLL'S PATENT SAFETY SWITCH FOR
Railroad Turnouts.** This invention for some time
in successful operation on one of the principal rail-
roads in the country, effectually prevents engines and
their trains from running off the track at a switch, left
wrong by accident or design. It acts independently
of the main track rails; being laid down or removed
without cutting or displacing them.

It is never touched by passing trains, except when
in use, preventing their running off the track. It is
simple in its construction and operation, requiring only
two castings and two rails; the latter, even if much
worn or used, not objectionable.

Working models of the Safety Switch may be seen
at Messrs. Davenport, Bridges & Kirk's Cambridge
Port, Mass., and at the office of the Railroad Journal,
New York.

Plans, Specifications, and all information obtained,
on application to the Subscriber, Inventor and Paten-
tee.

G. A. NICOLLS,
Reading, Pa.

**MACHINE WORKS OF ROGERS KETCHUM
& GROSVENOR, Patterson, N. J.** The un-
derigned receive orders for the following articles man-
ufactured by them of the most superior description in
every particular. Their works being extensive, and
the number of hands employed being large, they are
enabled to execute both large and small orders with
promptness and dispatch.

Railroad Work.—Locomotive Steam Engines and
Tenders; Driving and other Locomotive Wheels, Axles
Springs and Flange Tyres; Car Wheels of Cast Iron
a variety of patterns and chills; Car Wheels of Cast
Iron with wrought tyres; Axles of best American re-
fined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions
and of the most improved patterns, style and work-
manship.

Mill gearing and millwright work generally, hydrau-
lic and other presses; press screws; callenders; lathes
and tools of all kinds; iron and brass castings of all
descriptions.

ROGERS, KETCHUM & GROSVENOR,
Patterson, N. J., or 60 Wall St., New York.

IRON BRIDGES, BRIDGE & ROOF BOLTS,
etc. **STARKS & PRUYN,** of Albany, New York,
having at great expense established a manufactory with
every facility of Machinery for Manufacturing Iron
Bridges, Bridge and Roof Bolts, together with all kinds
of the larger sizes of Screw Bolts, Iron Railings, Steam
Boilers, and every description of Wrought Iron Work,
are prepared to furnish to order, on the shortest notice,
any of the above branches, of the very best of Amer-
ican Refined Iron, and at the lowest rates.

During the past year, S. & P. have furnished sever-
al Iron Bridges for the Erie Canal, Albany Basin, etc.
—and a large amount of Railroad Bridge Bolts, all of
which have given the most perfect satisfaction.

They are permitted to refer to the following gentle-
men:

Charles Cook,
Nelson J. Beach,
Jacob Hinds,

Willard Smith, Esq.,

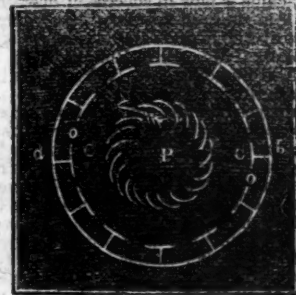
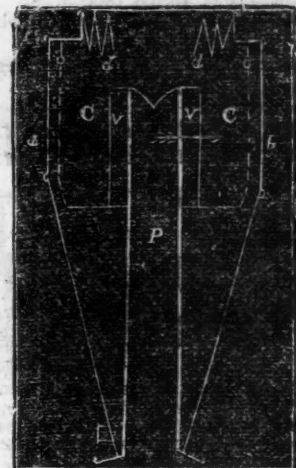
Messrs. Stone & Harris,
Mr. Wm. Howe,

Mr. S. Whipple,

January 1, 1849.

Canal Commissioners
of the
State of New York.
Engineer of the Bridges for
the Albany Basin.
Railroad Bridge Builders,
Springfield, Mass.
Engineer & Bridge Builder,
Utica, N. Y.

**FRENCH & BAIRD'S
Patent Spark Arrester.**



TO THOSE INTERESTED IN RAILROADS.
Railroad Directors and Managers are respect-
fully invited to examine an improved Spark Arrester re-
cently patented by the undersigned.

Our improved Spark Arresters have been exten-
sively used during the last year on both Passenger and
Freight Engines, and have been brought to such a
state of perfection, that no annoyance from sparks or
dust from the chimney of engines on which they are
used is experienced.

These Arresters are constructed on an entirely dif-
ferent principle from any heretofore offered to the pub-
lic. The form is such that a rotary motion is imparted
to the heated air, smoke and sparks passing through
the chimney, and by the centrifugal force thus acquir-
ed by the sparks and dust, they are separated from the
smoke and steam, and thrown into an outer chamber
of the chimney through openings near its top, from
whence they fall by their own gravity to the bottom of
this chamber; the smoke and steam passing off at the
top of the chimney, through a capacious and unob-
structed passage, thus arresting the sparks without im-
pairing the power of the engine by diminishing the
draught or activity of the fire in the furnace.

These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase, or obtain further information in regard to their merits.

R. L. Stevens, president Camden and Amboy railroad company; Rich'd Peters, sup't Georgia railroad, Augusta, Ga.; G. A. Nicolls, sup't Reading railroad, Reading, Pa.; W. E. Morris, pres't Philadelphia, Germantown and Norristown railroad company, Philad.; E. B. Dudley, pres't W. and R. railroad co., Wilmington, N. C.; Col. Jas. Gadsden, pres't S. Carolina railroad co., Charleston, S. C.; W. C. Walker, agent V. and J. railroad, Vicksburg, Miss.; R. S. Van Rensselaer, sup't Hart. and N. H. railroad; W. R. McKee, sup't Lexington and Ohio railroad; T. L. Smith, sup't N. Jersey railroad and transp. co.; J. Elliott, sup't M. P., Philadel. and Wilm. railroad; J. O. Sterns, sup't Elizabethtown and Somerville railroad; R. R. Cuyler, pres't Central railroad, Savannah, Ga.; J. D. Gray, sup't Macon, (Ga.) railroad; J. H. Cleveland, sup't of Southern railroad, Monroe, Mich.; M. F. Crittenden, sup't mo. power Central railroad, Detroit, Mich.; G. B. Fisk, pres't Long Island railroad, Brooklyn, L. I.

Orders for these chimneys and arresters, addressed to the subscribers, care of Baldwin and Whitney, of Philadelphia, will be promptly executed.

The subscribers will dispose of single rights, or rights for one or more States on reasonable terms.

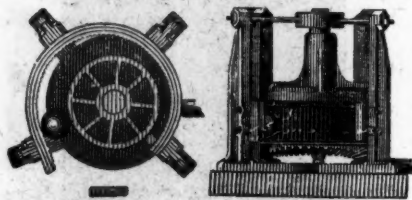
FRENCH & BAIRD.

Philadelphia, Pa., April 6, 1844.

The letters in the figures refer to the article given in the Journal of June, 1844.

MACHINERY.

Henry Burden's Patent Revolving Shingling Machine.



THE Subscriber having recently purchased the right of this machine for the United States, now offers to make transfers of the right to run said machine, or sell to those who may be desirous to purchase the right for one or more of the States.

This machine is now in successful operation in ten or twelve iron works in and about the vicinity of Pittsburgh, also at Phoenixville and Reading, Pa., Covington Iron Works, Md., Troy Rolling Mills, and Troy Iron and Nail Factory, Troy, N. Y., where it has given universal satisfaction.

Its advantages over the ordinary Forge Hammer are numerous: considerable saving in first cost; saving in power; the entire saving of shinglers, or hammerman's wages, as no attendance whatever is necessary, it being entirely self-acting; saving in time from the quantity of work done, as one machine is capable of working the iron from sixty puddling furnaces; saving of waste, as nothing but the scoria is thrown off, and that most effectually; saving of staffs, as none are used or required. The time required to furnish a bloom being only about six seconds, the scoria has no time to set, consequently is got rid of much easier than when allowed to congeal as under the hammer. The iron being discharged from the machine so hot, rolls better and is much easier on the rollers and machinery. The bars roll rounder, and are much better finished. The subscriber feels confident that persons who will examine for themselves the machinery in operation, will find it possesses more advantages than have been enumerated. For further particulars address the subscriber at Troy, N. Y.

P. A. BURDEN.

PATENT OIL FOR MACHINERY.—The Subscribers are now prepared to supply "Devlan's Patent Oil" in any quantity; Machinists, Manufacturers, etc., are requested to call and examine the article. Certificates of its efficacy and superiority over all other oils, from several of our most extensive manufacturers are now in our possession.

OIL.—Bleached and Unbleached Winter, Solar, Elephant and Whale Oils; also light colored selected raked Whale Oil, suitable for retailing. For sale by **ALLEN & NEEDLES,**

No. 22 and 23 S. Wharves, near Chestnut St., Philadelphia.

February 24, 1849.

ENGINE AND CAR WORKS.

DAVENPORT & BRIDGES,

HAVING ASSOCIATED WITH THEM

MR. LEWIS KIRK, OF READING, PA.,

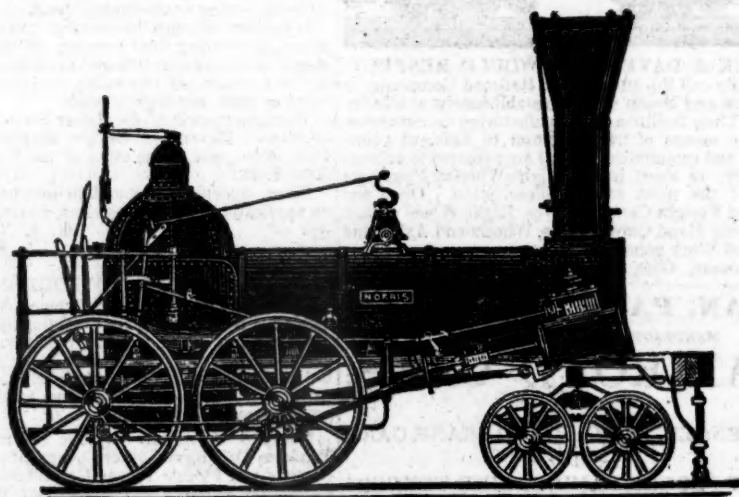
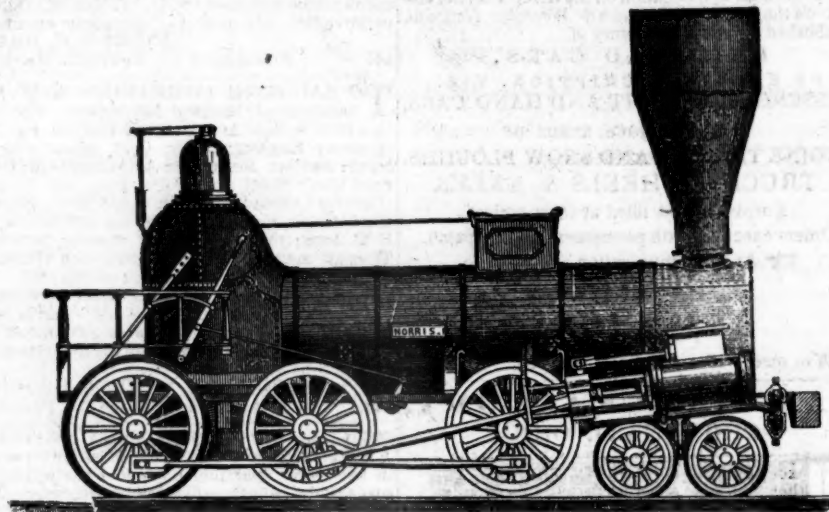
And recently enlarged their Establishment, (making it now the most extensive in the United States,) they are prepared to manufacture to order Locomotive Engines and Cars of every description. Stationary Engines, Steam Hammers, Boilers, and all kinds of Railroad Machinery. Also, Castings and Forge Irons of all kinds—including Chilled Wheels, Frogs, Chairs, Switches, Car Axles, and Locomotive Cranks, Connecting Rods, Steel Springs, Bolts, etc., etc. Orders from all parts of the country solicited for Engines and Cars, or any part or parts of the same. All orders will be furnished at short notice, and on as good terms as any manufactory in the country. Coaches pass our works every fifteen minutes during the day, from Brattle St., Boston.

DAVENPORT, BRIDGES & KIRK.

Cambridgeport, Mass., February 16th, 1849.

NORRIS' LOCOMOTIVE WORKS.

BUSHHILL, SCHUYLKILL SIXTH-ST., PHILADELPHIA,



THE UNDERSIGNED Manufacture to order Locomotive Steam Engines of any plan or size. Their shops being enlarged, and their arrangements considerably extended to facilitate the speedy execution of work in this branch, they can offer to Railway Companies unusual advantages for prompt delivery of Machinery of superior workmanship and finish.

Connected with the Locomotive business, they are also prepared to furnish, at short notice, Chilled Wheels for Cars of superior quality.

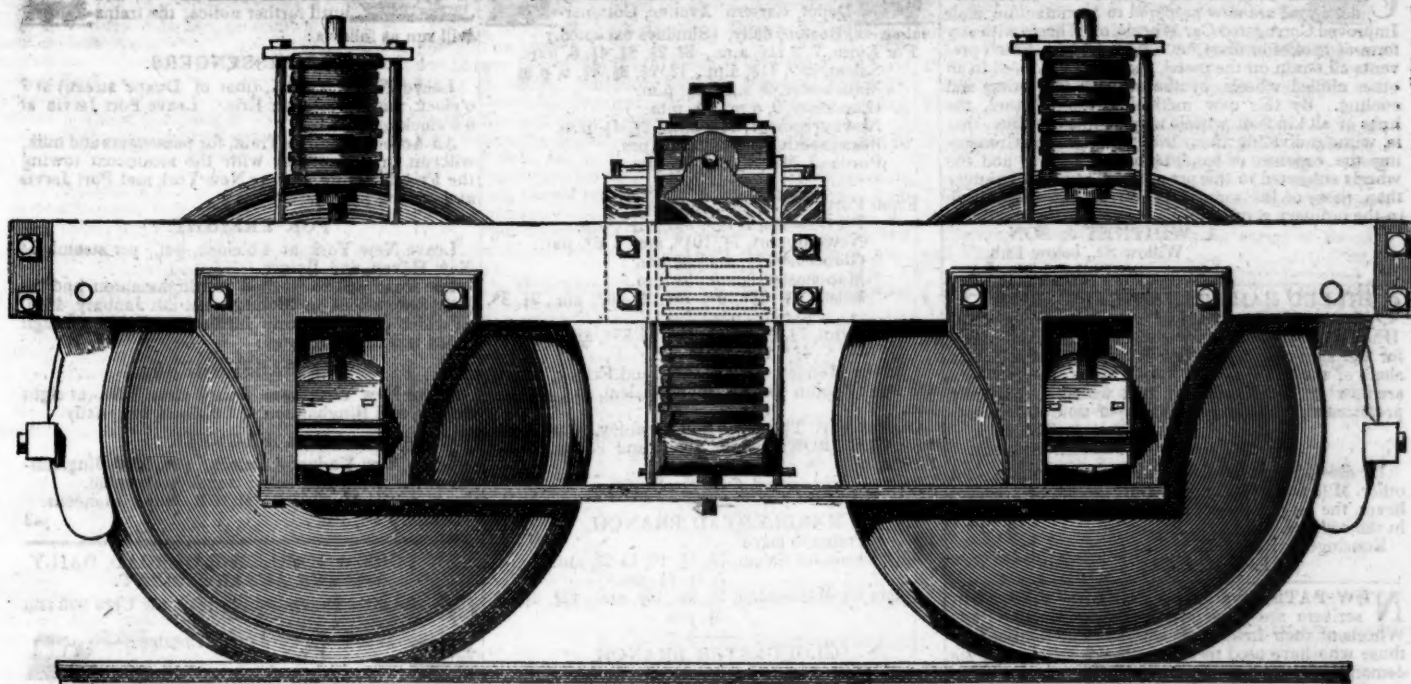
Wrought Iron Tyres made of any required size—the exact diameter of the Wheel Centre, being given, the Tyres are made to fit on same without the necessity of turning out inside.

Iron and Brass castings, Axles, etc., fitted up complete with Trucks or otherwise.

NORRIS BROTHERS.

FOWLER M. RAY'S

METALLIC INDIA RUBBER CAR SPRINGS.



THE NEW ENGLAND CAR COMPANY have introduced these Springs, and they are now in operation on every Railroad terminating in Boston, and several others in New England and the Middle States. Their qualities are well understood, or may be readily ascertained by every person interested to know them. They require no recommendation from the Company. The only known compound of India Rubber good for anything for this purpose is the Vulcanized India Rubber, invented by Charles Goodyear, of New Haven, and the application of it, and the form in which it is used, were invented by F. M. Ray, of New York. The right to manufacture and sell the substance itself for the purpose of Railroad Carriage Springs, as well as the form and application of it, are held exclusively by the New England Car Company. No other Company, or individual, has any right to sell or use it for such purpose, or has attempted so to use it in this country.

The New England Car Company guarantee the right to use the article they sell for Railroad Carriage Springs only, against all adverse rights, whether under patents or otherwise; and all persons and corporations are cautioned against a similar use of the article, when purchased of any other parties.

The Springs they sell are all manufactured in a uniform manner, and under the immediate inspection of their own Agent, and have been proved and known to answer the purpose. None have been manufactured in this country or imported from abroad besides their own, which would at all answer the purpose; and if any such should be produced, it cannot be used for Car Springs, while Goodyear's patents, and the right of the New England Car Company under them, remain in force.

The New England Car Company are now prepared to answer orders for all that may be called for, on reasonable notice, and uniform and equitable terms. They invite the most careful examination, and the severest scrutiny, into the merits of their Springs, wherever they have applied them. And if after such examination, your Company should judge it for their interest to adopt them, the N. E. Car Company would respectfully invite the patronage which they think they deserve, and are confident of receiving at your hands.

EDWARD CRANE, Agent,
Office 99 State-street.
Orders may also be left with **WM. RIDER & BROTHERS**, No. 58 Liberty-street, New York, or with **F. M. RAY, Agent,**
100 Broadway, N. Y.

The following article from the pen of Mr. HALE, the President of the Boston and Worcester Railroad, expresses his opinion of this important improvement, as published in the Boston Daily Advertiser of June 7, 1848. He says:

"Of the numerous uses to which the wonderful elasticity and durability of India Rubber renders this material applicable, we are hardly aware of one in which it has been more successful than in forming springs for railroad cars. We have had occasion to observe, for some months past, its application to this use, on one of the passenger cars on the Newton special train of the Boston and Worcester railroad. It is there used, not only for the springs on which the car rests, but for the springs attached to the draw bar at each end of the car, to prevent any jar on the sudden advancement or interruption of the motion of the car. For both these purposes it appears to be admirably adapted, and we do not learn, that during the period in which it has been used, any defect in it has been discovered. It renders the movements of the car extremely easy, and protects it more effectually, we think than any other spring which we have ever seen in use, from every harsh or unpleasant motion, either vertical or horizontal. It is simple in its form and application, extremely light, and little liable to get out of repair. During the period of some months, in which we have seen the springs in operation, there is no apparent wear or diminution of their efficacy."

The above statement of Mr. Hale agrees with my own observation in all particulars.

WM. PARKER, Supt., B. & W. R. R.
June 8, 1848.

I fully concur in the foregoing statement, from practical observation of its use for the last five months, on the Boston and Worcester railroad corporation cars.

D. N. PICKERING, Jr.,
Supt. Car Building B. & W. R. R.
Boston, June 10, 1848.

The New England Car Company have introduced their Vulcanized India Rubber Car Springs on the roads with which we are respectively connected, and we fully concur with Mr. Hale in the above opinion of their character and properties.

DAVENPORT & BRIDGES, Car Builders.
BRADLEY & RICE, Car Builders.
Boston, June, 1848.

LAWRENCE'S ROSENDALE HYDRAULIC Cement. This Cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Flooms, and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years. For sale in lots to suit purchasers, in tight papered barrels, by

JOHN W. LAWRENCE,
142 Front-street, New York.
Orders for the above will be received and promptly attended to at this office. 32 ly.

ENGINEERS' AND SURVEYERS' INSTRUMENTS MADE BY EDMUND DRAPER,
Surviving partner of **STANCLIFFE & DRAPER.**



No 23 Pear street, y10 near Third, below Walnut, Philadelphia.

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to 48 in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T. L., and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.



Manufactured and for sale by **MORRIS, TASKER & MORRIS.**
Warehouse S. E. Corner of Third & Walnut Streets, PHILADELPHIA.

TO LOCOMOTIVE AND MARINE ENGINE Boilers Builders. Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine, and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; hollow Pistons for Pumps of Steam Engines etc. Manufactured and for sale by

MORRIS, TASKER & MORRIS,
Warehouse S. E. corner 3d and Walnut streets, Philadelphia.

Railroad Iron.

RAILROAD IRON & LOCOMOTIVE TYRES imported to order, and constantly on hand, by **A. & G. RALSTON,**
4 South Front St., Philadelphia.

RAILROAD WHEELS.

CHILLED RAILROAD WHEELS.—THE UN-dersigned are now prepared to manufacture their Improved Corrugated Car Wheels, or Wheels with any form of spokes or discs, by a new process which prevents all strain on the metal, such as is produced in all other chilled wheels, by the manner of casting and cooling. By this new method of manufacture, the hubs of all kinds of wheels may be made whole—that is, without dividing them into sections—thus rendering the expense of banding unnecessary; and the wheels subjected to this process will be much stronger than those of the same size and weight, when made in the ordinary way.

A. WHITNEY & SON,
Willow St., below 13th,
Philadelphia, Pa.

CHILLED RAILROAD WHEELS.—THE UN-dersigned, the Original Inventor of the Plate Wheel with solid hub, is prepared to execute all orders for the same, promptly and faithfully, and solicits a share of the patronage for those kind of wheels which are now so much preferred, and which he originally produced after a large expenditure of time and money.

A. TIERS,
Point Pleasant Foundry.

He also offers to furnish Rolling Mill Castings, and other Mill Gearing, with promptness, having, he believes, the largest stock of such patterns to be found in the country.

Kensington, Philadelphia Co.,
March 12, 1848.

NEW PATENT CAR WHEELS.—THE SUB-scribers are now manufacturing Metallic Plate Wheels of their invention, which are pronounced by those who have used them, a superior article, and the demand for them has met the most sanguine anticipations of the inventors. Being made of a superior quality of Charcoal Iron, they are warranted equal to any manufactured.

We would refer Railroad Companies and others to the following roads that have them in use. Hartford and New Haven, Connecticut River, Housatonic, Harlem, Farmington, and Stonington Railroads.

SIZER & CO.,
Springfield, Mass.

RAILROADS.

BOSTON AND PROVIDENCE RAILROAD.

On and after MONDAY, OCTOBER 2d, the

Trains will run as follows:—
Steamboat Train—Leave Boston at 5 pm. Leaves Providence on the arrival of the train from Stonington.

Accommodation Trains—Leave Boston at 8 am., and 3½ pm. Leave Providence at 8½ am., and 3½ pm.

Dedham Trains—Leave Boston at 9 am., 12 m., 3, 6, and 10½ pm. Leave Dedham at 7½, 10½, am., 1½, 4½, and 9 pm.

Stoughton Trains—Leave Boston at 11½ am., and 4½ pm. Leave Stoughton at 8½ am., and 2½ pm.

Freight Trains—Leave Boston at 11 am., and 6 pm. Leave Providence at 4 am., and 740 am.

On and after Wednesday, Nov. 1, the DEDHAM TRAIN will run as follows: Leave Boston at 9 am., 12 m., 3, 5½, and 10½ pm. Leave Dedham at 8, 10½, am., 1½, 4½, and 9 pm.

WM. RAYMOND LEE, Sup't.

NORWICH AND WORCESTER RAILROAD.

Winter Arrangement.—1848.

Accommodation Trains daily (Sundays excepted.)

Leave Norwich at 6 am., 12 m., and 2½ pm. Leave Worcester at 6½ and 10 am., and 4½ pm., connecting with the trains of the Boston and Worcester, and Providence and Worcester railroads.

New York & Boston Line. Railroad & Steamers. Leave New York and Boston daily, Sundays excepted; at 5 pm.—At New York from pier No. 1, North River.—At Boston from corner Lincoln and Beach streets, opposite United States Hotel. The steamboat train stops only at Framingham, Worcester, Danielsonville and Norwich.

Freight Trains leave Norwich and Worcester daily, Sundays excepted.—From Worcester at 6½ am., from Norwich at 7 am.

Fares are Less when paid for Tickets than when paid in the Cars.

S. H. P. LEE, Jr., Sup't.

EASTERN RAILROAD, WINTER ARRANGEMENT.

On and after MONDAY, Oct. 2, 1848, Trains will leave Eastern Railroad Depot, Eastern Avenue, Commercial-street, Boston, daily, (Sundays excepted.)

For Lynn, 7, 9 11½, am., 12, 2½, 3½, 4½, 6, p.m.
Salem, 7, 9, 11½, am., 12, 2½, 3½, 4½, 6, p.m.
Manchester, 9, am., 3½, p.m.
Gloucester, 9, am., 3½, p.m.
Newburyport, 7, 11½, am., 2½, 4½, p.m.
Portsmouth, 7, am., 2½, 4½, p.m.
Portland, Me., 7, am., 2½, p.m.

And for Boston,
From Portland, 7½, am., 3, p.m.
Portsmouth, 7, 9½, am., 5½, p.m.
Newburyport, 7½, 10½, am., 2, 6, p.m.
Gloucester, 7½, am., 3½, p.m.
Manchester, 8, am., 3½, p.m.
Salem, 7½, 8½, 9, 10½, 11-40, am., 2½, 3, 4½, 7, p.m.
Lynn, 7½, 8½, 9½, 10½, 11-55, am., 2½, 3½, 4½, 7½, p.m.

On Monday, Wednesday, and Friday, a train will leave Boston for Lynn and Salem, at 7 o'clock; p.m.

On Tuesday, Thursday, and Saturday, a train will leave EAST BOSTON for Lynn and Salem, at 10½ o'clock, p.m.

* On their arrival from the East.

MARBLEHEAD BRANCH.

Trains to leave
Marblehead for Salem, 7½, 8½, 10, 11-25, am.
2, 4½, 6½, p.m.
Salem for Marblehead, 7½, 9½, 10½, am., 12½, 3½, 5½, 6½, p.m.

GLOUCESTER BRANCH.

Trains leave
Salem for Manchester at 9½, am., 4½, p.m.
Salem for Gloucester at 9½, am., 4½, p.m.
Trains leave
Gloucester for Salem at 7½, am., 3½ p.m.
Manchester for Salem at 8, am., 3½ p.m.
Freight Trains each way daily. Office 1 Merchants' Row, Boston.

Feb. 3. JOHN KINSMAN, Superintendent.

ESSEX RAILROAD—SALEM TO LAWRENCE.

through Danvers, New Mills, North Danvers, Middleton, and North Andover.

On and after Monday, Oct. 2, 1848, Trains leave daily (Sundays excepted,) Eastern Railroad Depot, Washington-st.

Salem for South Danvers at 7.45, 9, am., 12.45, 3.15, 6.45, p.m.
Salem for North Danvers at 7.45, 9, am., 12.45, 3.15, p.m.
Salem for Lawrence, 9, am., 3.15, p.m.
Danvers " 9.10, am., 3.15, p.m.
North Danvers " 9.20, am., 3.35, p.m.
Middleton " 9.30, am., 3.45, p.m.
North Andover " 10, am., 4.20, p.m.
South Danvers for Salem at 7.45, 8.45, 11.30, am., 2, 4.55, p.m.
North Danvers " 8.20, 11.10, am., 1.40, 5.40, p.m.
Middleton " 11, am., 4.30, p.m.
North Andover " 10.35, am., 5.05, p.m.
Lawrence " 10.30, am., 5, p.m.

* These trains will not stop at Frye's Mills nor Grove-st.

JOHN KINSMAN, Superintendent.
Salem, Oct. 2, 1848.

BOSTON AND MAINE RAILROAD.

Spring Arrangement, 1849.

Outward Trains from Boston

For Portland at 6½ am. and 2½ pm.
For Rochester at 6½ am., 2½ pm.
For Great Falls at 6½ am., 2½, 4½ pm.
For Haverhill at 6½ and 12 m., 2½, 4½, 6 pm.
For Lawrence at 6½, 9, am., 12 m., 2½, 4½, 6, 7½ pm.
For Reading 6½, 9 am., 12 m., 2½, 4½, 6, 7½, 9½ pm.

Inward trains for Boston

From Portland at 7½ am., 3 pm.
From Rochester at 9 am., 4½ pm.
From Great Falls at 6½, 9½ am., 4½ pm.
From Haverhill at 7, 8½, 11 am., 3, 6½ pm.
From Lawrence at 6, 7½, 8½, 11½, am., 1½, 3½, 7 pm.
From Reading at 6½, 7½, 9, am., 12 m., 2, 3½, 6, 7½ pm.

MEDFORD BRANCH TRAINS.

Leave Boston at 7, 9½ am., 12½, 2½, 5½, 6½, 9½ pm.
Leave Medford at 6½, 8, 10½ am., 2, 4, 5½, 6½, pm.

* On Thursdays, 2 hours; on Saturdays, 1 hour later.

CHAS. MINOT, Sup't.
Boston, March 27, 1849.

NEW YORK AND ERIE RAILROAD.

WINTER ARRANGEMENT.

On Monday, January 1st, and until further notice, the trains

will run as follows:

FOR PASSENGERS.

Leave NEW YORK, (foot of Duane street,) at 7 o'clock, am., by steamer Erie. Leave Port Jervis at 6 o'clock am.

An Accommodation Train, for passengers and milk, will run in connection with the steamboat towing the Freight Barge, leaving New York and Port Jervis at 4 o'clock pm.

FOR FREIGHT.

Leave New York at 4 o'clock, pm., per steamboat New Haven, and Barges.

The Road will be opened to Binghamton and intermediate places on Monday, the 8th January, 1849, on which day, and until further notice, the through trains will run as follows:

FOR PASSENGERS.

Leave New York from Duane street Pier, at eight o'clock, am., and Binghamton at 7 o'clock, am., daily.

FOR FREIGHT.

Leave New York at 4 o'clock, pm., and Binghamton at 7 o'clock, am., daily, Sundays excepted.
H. C. SEYMOUR, Superintendent.

January 1st, 1849. ja3

NEW YORK & HARLEM RAILROAD, DAILY.

WINTER ARRANGEMENT.

On and after December 1st, 1848, the Cars will run

as follows, until further notice:—

Trains will leave the City Hall, New York, for Harlem and Morrisiana at 7, 9, 9.30, 11, am. 12 m., 2, 4, 4.15, 5.30, pm.

Trains will leave the City Hall, New York, for Fordham and Williams Bridge, at 7.30 and 9.30 am., 12 m., 2, 4.15, 5.30 pm.

Trains will leave the City Hall, New York, for Hunt's Bridge, Underhill's and Hart's Corners, at 9.30 am., 4.15 pm.

Trains will leave the City Hall, New York, for Tuckahoe and White Plains, at 7.30 and 9.30 am., 3 and 4.15 pm.

Trains will leave Davis' Brook, Pleasantville, Chappaqua, Mount Kisco, Bedford, Mechanicville, Purdy's and Croton Falls, at 7.30 and 9.30 am., 3 pm.

NOTICE—Passengers are reminded of the great danger of standing upon the platform of the cars, and hereby notified that the practice is contrary to the rules of the Company, and that they do not admit any responsibility for injury sustained by any passenger upon the platforms, in case of accident.

Returning to New York will leave

Morrisiana and Harlem at 7.20, 8, 8.50, 10 am., 12 m., 1.35, 3, 3.45, 5, 5.35 pm.

Fordham and William's Bridge at 7, 8.30, 9.50 am., 1.15, 3.25, 5.20 pm.

Hunt's Bridge at 8.20 am., 3.18 pm.

Underhill's Road at 8.10 am., 3.08 pm.

Tuckahoe at 8.05, 9.30 am., 3.05, 5 pm.

Hart's Corners at 7.55 am., 2.52 pm.

White Plains at 7.45, 9.10 am., 2.45, 4.40 pm.

Davis' Brook at 9 am., 2.35, 4.30 pm.

Pleasantville at 8.45 am., 2.20, 4.19 pm.

Mount Kisco at 8.30 am., 2, 4 pm.

Bedford at 8.25 am., 1.55, 3.55 pm.

Mechanicville at 8.15 am., 1.45, 3.45 pm.

Purdy's at 8.05 am., 1.35, 3.35 pm.

Croton Falls, at 8 am., 1.30, 3.30 pm.

The trains for Harlem and Morrisiana leaving City Hall at 7, 9, 9.30, 11, 12, 2, 4, and 5.30, and from Morrisiana and Harlem at 7.20, 8, 10, 12, 1.35, 3, 3.45, and 5 o'clock, will land and receive passengers at 27th st., 42d, 51st, 61st, 79th, 86th, 109th, 115th, 125th, and 132d streets.

The 7.30 am., and 3 pm. Trains from New York to Croton Falls, and the 8 am. Train from Croton Falls will not stop between White Plains and New York, except at Tuckahoe, Williams Bridge and Fordham.

A car will precede each train ten minutes to take up passengers in the city. The last car will not stop, except at Broome st. and 32d street.

Freight Trains leave New York at 6 am. and 1 pm.; leave Croton Falls at 7 am. and 2.30 pm., Sundays excepted.

NOTICE—On Sundays the 7 am. to Harlem and Morrisiana, returning at 8 o'clock, and the 7.30 am. to Croton Falls, returning 1.30 pm., will be omitted, and the 7 am. from Williams Bridge will leave at 7.40, and Morrisiana and Harlem at 8 o'clock am. dl

BALTIMORE AND SUSQUEHANNA RAILROAD.

ROAD.—Reduction of Fare. Morning and Afternoon Trains between Baltimore and York.—The Passenger Trains

run daily, except Sundays, as follows:

Leaves Baltimore at	9 am. and 3 pm.
Arrives at York at	9 am. and 3 pm.
Leaves York at	5 am. and 3 pm.
Arrives at Baltimore at	12 pm. & 8 pm.
Leaves York for Columbia at	1 pm. & 8 am.
Leaves Columbia for York at	8 am. & 2 pm.

Fare:	
Fare to York	\$1 50
Wrightsville	2 00
Columbia	2 12½

Way points in proportion.

PITTSBURG, GETTYSBURG, AND HARRISBURG.

Through tickets to Pittsburg via stage to Harrisburg

Or via Lancaster by railroad

Through tickets to Harrisburg or Gettysburg

In connection with the afternoon train at 3½ o'clock,

a horse car is run to Green Spring and Owning's

Mill, arriving at the Mills at

Returning, leaves Owning's Mills at

D. C. H. BORDLEY, Sup't.

31 ly. Ticket Office, 63 North st.

GEORGIA RAILROAD. FROM AUGUSTA

TO ATLANTA—171 MILES.

AND WESTERN AND ATLANTIC RAILROAD, FROM ATLANTA TO DALTON, 100 MILES.

This Road, in connection with the

South Carolina Railroad, and West-

ern and Atlantic Railroad, now forms a continuous

line, 408 miles in length, from Charleston to Dalton

(Cross Plains) in Murray county, Ga. 32 miles from

Chattanooga, Tenn.

RATES OF FREIGHT.

	Between Augusta and Dalton, 271 miles.	Between Charleston, O. and Dalton, 408 miles.
1st class Boxes of Hats, Bonnets, and Furniture, per cubic foot	\$0 18	\$0 28
2d class Boxes and Bales of Dry Goods, Sadlery, Glass, Paints, Drugs, and Confectionary, per 100 lbs.	1 00	1 50
3d class Sugar, Coffee, Liquor, Bagging, Rope, Cotton, Yarns, Tobacco, Leather, Hides, Copper, Tin, Feathers, Sheet Iron, Hollow ware, Castings, Crockery, etc.	0 60	0 85
4th class Flour, Rice, Bacon, Pork, Beef, Fish, Lard, Tallow, Beeswax, Bar Iron, Ginseng, Mill Gearing, Pig Iron, and Grindstones, etc.	0 40	0 65
Cotton, per 100 lbs.	0 45	0 70
Molasses per hogshead	8 60	13 50
" " barrel	2 50	4 25
Salt per bushel	0 18	0 25
Salt per Liverpool sack	0 65	
Ploughs, Corn Shellers, Cultivators, Straw Cutters, Wheelbarrows	0 75	1 50

German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Company will be forwarded free of commissions. Freight payable at Dalton.

F. C. ARMS, Sup't of Transportation.

THE WESTERN AND ATLANTIC RAILROAD.

This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur, and Tusculumbia, Alabama, and Memphis, Tennessee.

On the same days the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT, Chief Engineer

LITTLE MIAMI RAILROAD.—WINTER ARRANGEMENT.

Change of Hours.

On and after Thursday, November 9th, 1848, until further notice, Passenger Trains will

run as follows:

Leave Depot East Front street at 9½ o'clock, am., and 2½ o'clock, p.m., for Milford, Foster's Crossings, Deerfield, Morrow, Waynesville, Spring Valley, Xenia, Yellow Springs, and Springfield.

Returning, leaves Springfield, at 2½ o'clock, and 9½ o'clock, am.

Passengers for New York, Boston, and intermediate

points, should take the 9½ o'clock, am., Train from Cincinnati.

Passengers for Columbus, Zanesville, Wheeling and

intermediate towns, should take the 9½ o'clock, am., Train.

The Ohio Stage Company are running the following

lines in connection with the Trains:

A Daily Daylight Line to Columbus from Springfield

in connection with the Morning Train from Cincinnati.

Also, Daily Lines to Columbus, from Xenia and Springfield, connecting with the 2½ o'clock, pm.

Train from Cincinnati.

The 2½ pm., Train from Cincinnati, and 2½ am.,

Train from Springfield, are intended for the accom-

modation of Way Passengers only, and will be eight

hours on the road.

Fare from Cincinnati to Xenia

Do do Springfield

Do do Sandusky City

Do do Buffalo

Do do Columbus

For other information and through tickets, apply at

the Ticket Office on Broadway, near Front-st., Cincinnati.

W. H. CLEMENTS, Superintendent.

The Company will not be responsible for Bag-

gage exceeding 50 dollars in value, unless the same is

returned to the Conductors or Agent, and freight paid

at the rate of a passage for every 500 dollars in value

to that amount.

BALTIMORE AND OHIO RAILROAD, MAIN

STEM. The Train carrying the Great Western

Mail leaves Baltimore every morning

at 7½, and Cumberland at 8 o'clock

passing Ellicott's Mills, Frederick, Harper's Ferry,

Martinsburgh and Hancock, connecting daily each

way with—the Washington Trains at the Relay House

seven miles from Baltimore, with the Winchester

Trains at Harpers Ferry—with the various railroad

and steamboat lines between Baltimore and Philadel-

phia, and with the lines of Post Coaches between

Cumberland and Wheeling and the fine Steamboats

on the Monongahela Slack Water between Browns-

ville and Pittsburgh. Time of arrival at both Cum-

berland and Baltimore 5½ P. M. Fare between these

points \$7, and 4 cents per mile for less distances.

Fare through to Wheeling \$11, and time about 36

hours, to Pittsburgh \$10, and time about 32 hours.

Through tickets from Philadelphia to Wheeling \$13,

to Pittsburgh \$12. Extra train daily, except Sundays,

from Baltimore to Frederick at 4 P. M., and from

Frederick to Baltimore at 8 A. M.

WASHINGTON BRANCH.

Daily trains at 9 A. M., and 5 P. M., and 12 at night

from Baltimore, and at 6 A. M. and 5½ P. M. from

Washington, connecting daily with the lines North,

South and West, at Baltimore, Washington, and the

Relay House. Fare \$1 60 through between Baltimore

and Washington, in either direction, 4 cents per mile

for immediate distances.

PHILADELPHIA, WILMINGTON, & BALTI-

MORE RAILROAD.—1848.

Winter Arrangement.

December 4th.—Fare \$4.

Leave Philadelphia 8 am., and 4 pm.

Leave Baltimore 9 am., and 8 pm.

Sunday—Philadelphia only at 4 pm.

Baltimore only at 8 pm.

Trains stop at way stations. A second class car

run with morning line only.

Charleston, S. C.

Through tickets Philadelphia to Charleston, \$20.

Connecting lines to Charleston leave Philadelphia,

at 4 pm. daily—leave Baltimore at 11½ pm. daily.

Pittsburg and Wheeling.

Through ticket, Philadelphia to Pittsburg, \$12.

Wheeling, 13.

All through tickets only sold at office Philad.

Wilmington Accommodation.

Leaves Philadelphia at 1½ and 4 pm.

Leaves Wilmington at 8 am., and 4 pm.

N.B.—Extra baggage charged for.

I. R. TRIMBLE, Gen. Supt.

PHILADELPHIA & READING RAILROAD.

Passenger Train Arrangement for 1848.

A Passenger Train will leave Phil-

adelphia and Pottsville daily, ex-

cept Sundays, at 9 o'clock am.

The Train from Philadelphia arrives at Reading at

12 18 m.

The Train from Pottsville arrives at Reading at 10

43 am.

Fares: Miles. No. 1. No. 2

Between Phila. and Pottsville, 92 \$3.50 and \$3.00

Reading 58 2.25 and 1.90

Pottsville 34 1.40 and 1.20

Five minutes allowed at Reading, and three at other

way stations.

Passenger Depot in Philadelphia corner of Broad

and Vine streets.

CENTRAL RAILROAD—FROM SAVANNAH

to Macon. Distance 190 miles.

This Road is open for the trans-

portation of Passengers & Freight

Rate of Passage \$8 00. Freight—

On weight goods generally, 50 cts. per hundred

On measurement goods, 13 cts. per cubic ft.

On brls. wet (except molasses

and oil) 1 50 per barrel.

On brls. dry (except lime) 80 cts. per barrel.

On iron in pigs or bars, castings

for mills, and unboxed machi-

nery 40 cts. per hundred

On hhd. and pipes of liquor,

not over 120 gallons \$5 00 per hhd.

On molasses and oil \$6 00 per hhd.

Goods addressed to F. WINTER, Agent, forward

ed free of commission.

THOMAS PURSE,

Gen'l Sup't Transportation.

SOUTH CAROLINA RAILROAD.—A PAS-

senger Train runs daily from Charleston, on the

arrival of the boats from Wilmington,

N. C., in connection with trains on

the Georgia, and Western and Atlantic Railroads—

and by stage lines and steamers connects with the

Montgomery and West Point, and the Tusculumbia

Railroad in N. Alabama.

Fare through from Charleston to Montgomery

daily \$26 50

Fare through from Charleston to Huntsville,

Decatur and Tusculumbia 22 00

The South Carolina Railroad Co. engage to receive

merchandise consigned to their order, and to forward

the same to any point on their road; and to the dif-

ferent stations on the Georgia and Western and Atlan-

tic Railroad; and to Montgomery, Ala., by the West

Point and Montgomery Railroad.

JOHN KING, Jr., Agent.

PATENT MACHINE MADE HORSE-SHOES.

The Troy Iron and Nail Factory have al-

ways on hand a general assortment of Horse

Shoes, made from Refined American Iron.

Four sizes being made, it will be well for

those ordering to remember that the size of

the shoe increases as the numbers—No. 1 being the

smallest.

P. A. BURDEN, Agent.

Troy Iron and Nail Factory, Troy, N. Y.

SPRING STEEL FOR LOCOMOTIVES, TEN-

ders and Cars.—The subscriber is engaged

in manufacturing spring steel from 1½ to 6 inches in

width, and of any thickness required: large quantities

are yearly furnished for railroad purposes, and wher-

ever used its quality has been approved of. The estab-

lishment being large, can execute orders with great

promptitude, at reasonable prices, and the quality war-

ranted. Address J. F. WINSLOW, Agent.

Albany Iron and Nail Works.

PATENT HAMMERED RAILROAD, SHIP &

BOAT SPIKES.—The Albany Iron Works

have always on hand, of their own manufacture, a

large assortment of Railroad, Ship and Boat Spikes,

from 2 to 12 inches in length, and of any form of head.

From the excellence of the material always used in

their manufacture, and their very general use for rail-

roads and other purposes in this country, the manu-

facturers have no hesitation in warranting them fully

equal to the best spikes in market, both as to quality

and appearance. All orders addressed to the subscrib-

ers at the works will be promptly executed.

JOHN F. WINSLOW, Agent.

Albany Iron and Nail Works, Troy, N. Y.

The above Spikes may be had at factory prices, of

Erastus Corning & Co., Albany; Merritt & Co., New

York; E. Pratt & Brother, Baltimore, Md.



RIDER'S PATENT IRON BRIDGE.

THE RIDER IRON BRIDGE having been fully tested on the Harlem Railroad, by constant use for about eighteen months, and found to answer the full expectations of its most sanguine friends, is now offered to the public with the utmost confidence as to its great utility over any other Bridge now known.

The plan of this Bridge is to use the iron so as to obtain its greatest longitudinal strength, and at the same time is so arranged as to secure the combined principles of the Arch, Suspension and Triangle, all under such controlling power as causes each to act in the most perfect and secure manner, and at the same time impart its greatest strength to the whole work.

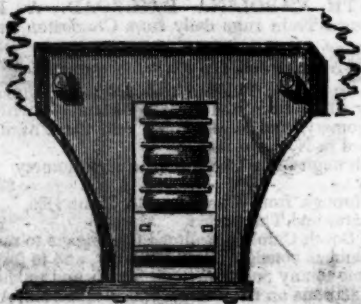
THE IRON RIDER BRIDGE COMPANY are prepared to furnish large quantities of Iron Bridging for Railroad or other purposes, made under the above patent, at short notice, and at prices far more economical than the best wood structure, and on certain conditions, the first cost may be made the same as wood.

Models, and pamphlets giving full descriptions of the RIDER BRIDGE, with certificates based on actual trial from undoubted sources, will be found at the office of the Company, 74 BROADWAY, up stairs, or of W. RIDER & BROTHERS, 58 Liberty Street, where terms of contract will be made known, and where orders are solicited.

November 25, 1848.

M. M. WHITE,
Agent for the Company.

Fuller's Patent India-Rubber Springs.



THERE can now be no ground of opposition whatever to these Springs. The Commissioner of Patents has not only rejected the application for a Patent for a similar Spring, but a Patent has just been granted for an entirely new species of India Rubber, the quality of which can be surpassed by no other kind, as the experiments which have lately been publicly made, have fully proved. No extremes of heat or cold can effect it, nor will any amount of pressure permanently alter its shape. This Patent refutes the statement of the "New England Car Company" as to their sole right to use India Rubber.

The Spring (composed by alternate layers of India Rubber Discs and Metal Plates) is superior to any other form of Spring, for several reasons: It is the lightest, the most simple and most durable—there being less friction in this than in other kind; it can be regulated to any extent desired. A less quantity of Rubber is required in this form to make a good spring than in any other because each disc or ring of India Rubber is firmly supported by metal plates, and forms in itself a distinct spring—nor is any spiral spring required. The Patentee is consequently able to supply efficient springs at a less cost than any other parties can do. Purchasers are guaranteed in the use of these springs.

The New England Car Company have no right to make an India Rubber Spring with a Bolt through the centre. All companies using such a spring are liable to an action.

Fuller's spring has been used nearly four years with complete success. It is applicable equally to Passenger and Freight Cars, to Locomotives and Tenders. Bumpers and Draw Springs are always kept on hand, which merely require screwing to a car. It has lately been applied also to several kinds of Machines.

Action will be brought against all persons infringing upon these patents.

The subscriber will show Models and Drawings of the various modes of application to Cars, Machines, Omnibuses, &c.

G. M. KNEVITT, Agent.
Principal office, No. 78 Broad st., New York.

Branch office, Messrs. James Lee & Co.'s, No. 18 India Wharf, Boston.

Mr. Hale, the President of the Boston and Worcester Railroad, wrote an article concerning Fuller's Springs. The "New England Car Company" take the liberty of publishing that article, omitting, however, a very important part; it is therefore given in full now, and the portion omitted by the New England Car Company is printed in italics, that the public may judge the manner in which this "company" pervert Mr. Hale's meaning.

[From the Boston Advertiser of the 7th June].

INDIA RUBBER SPRINGS FOR RAILROAD CARS.

"Of the numerous uses to which the wonderful elasticity and durability of India rubber, renders this material applicable, we are hardly aware of one, in which it has been more successful than in forming springs for railroad cars. We have had occasion to observe, for some months past, its application to this use, on one of the passenger cars on the Newton special train of the Boston and Worcester railroad. It is there used not only for the springs on which the car rests, but for the springs attached to the draw bar, at each end of the car, to prevent any jar on the sudden commencement, or interruption of the motion of the car. For both these purposes it seems to be admirably adapted, and we do not learn that during that period in which it has been used, any defect has been discovered. It renders the movements of the car extremely easy, and protects it more effectually, we think, than any other spring we have seen in use, from every harsh or unpleasant motion, either vertical or horizontal. It is also simple in its form and application, extremely light, and little liable to get out of repair. During the period of some months in which we have seen the springs in operation, there is no apparent wear or diminution of its efficiency. Each spring is composed of several circular layers of rings of India rubber, a thin metallic plate of the same size being interposed between each of the layers. From the simplicity of its form, it cannot be expensive, and it admits of being made more or less elastic almost at pleasure. The invention, we understand, was first patented in England, where it has been introduced into general use on several of the principal railroads, and we have no doubt it will come into very extensive use in this country. The patent for this invention, we understand, has been granted to Mr. W. C. Fuller, in England and France, and also in this country. Mr. Knevit, of New York, is the agent for the patentee in the United States, and he has established a branch office for the supply of the article in this city, as may be learned from an advertisement in another column of this paper."

CORROSIVE SUBLIMATE.

THIS article now extensively used for the preservation of timber, is manufactured and for sale by POWERS & WEIGHTMAN, manufacturing Chemists, Philadelphia.

Jan. 20, 1849.

RAILROAD SCALES, ETC.

FAIRBANKS' RAILROAD SCALES.—THE subscribers are prepared to construct at short notice, Railroad and Depot Scales, of any desired length and capacity. Their long experience as manufacturers—their improvements in the construction of the various modifications, having reference to strength, durability, retention of adjustment, accuracy of weight and dispatch in weighing—and the long and severe tests to which their scales have been subjected—combine to ensure for these scales the universal confidence of the public.

No other scales are so extensively used upon railroads, either in the United States or Great Britain;—and the managers refer with confidence to the following in the United States.

Eastern Railroad.	Boston & Maine Railroad.
Providence Railroad.	Providence and Wor. Road.
Western Railroad.	Concord Railroad.
Old Colony Railroad.	Fitchburg Railroad.
Schenectady Railroad.	Syracuse and Utica Road.
Balt. and Ohio Railroad.	Baltimore and Susq. Road.
Phila. & Reading Road.	Schuylkill Valley Road.
Central (Ga.) Railroad.	Macon and Western Road.
New York and Erie Railroad.	

And other principal Railroads in the Western, Middle and Southern States.

E. & F. FAIRBANKS & CO.

St. Johnsbury, Vt.

Agents, } FAIRBANKS & Co., 81 Water st., N. York.
 } A. B. NORMIE, 196 Market st., Philadelphia.
April 22, 1848. 1y-17

RAILROAD SCALES.—THE ATTENTION of Railroad Companies is particularly requested to Ellicott's Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make Platform Scales in the United States;—supposing that an experience of Twenty years has given him a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearings and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. ELICOTT has made the largest Railroad Scale in the world, its extreme length was One Hundred and Twenty Feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELICOTT & ABBOTT,

Factory, 9th st., near Coates, cor. of Melon st.
Office, No. 3, North 5th street,
Philadelphia, Pa.,
1y25

English Railroad Iron.

3000 Tons H pattern Rails in store, and to arrive this Spring—58 and 60 lbs per yard; of an approved pattern, best English make, each bar being stamped with the manufacturer's name, and inspected before shipment at the works in Wales. For sale by DAVIS, BROOKS & CO., 68 Broad street.

March 18, 1849

2m.11

AMERICAN RAILROAD JOURNAL.

PUBLISHED BY J. H. SCHULTZ & CO.

NOS. 9 & 10 PRIME'S BUILDINGS,

(THIRD FLOOR.)

54 WALL STREET,

NEW YORK CITY.

TERMS.—Five Dollars a year, in advance.

RATES OF ADVERTISING.

One page per annum.....	\$125 00
One column ".....	50 00
One square ".....	15 00
One page per month.....	20 00
One column ".....	8 00
One square ".....	2 50
One page, single insertion.....	8 00
One column ".....	3 00
One square ".....	1 00
Professional notices per annum.....	5

LETTERS and COMMUNICATIONS for this Journal may be directed to the Editor,

HENRY V. POOR, 54 WALL ST.